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FOR 1889.

[TWENTY-FIRST ANNUAL SESSION.]

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INDEX.

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VOLUME II.

April, 1889, to March, 1890, Inclusive.

A

Abdominal Sections, Tait's Second Thousand 22
Abscess of Lung, Case of 218
Action of Chloroform, as Developed by the Experiments of the Second Hyderabad Commission 329
A Case for Diagnosis 226
A Child Swallows a Pin 157
Aconitine and Veratrine 242
Action of Sulfonal 23
Acute Diseases, Jugulation of 93
Address of Welcome and Response 68, 69
Address of Retiring President 75
Address at Opening of Omaha Medical College 184
Adherent Placenta and Hour-Glass Contraction 156
Amendments to By-Laws of American Medical Association . 14
Amputation of Cervix Uteri for Cancer 55
Amputation in Lesions of the Knee Joint 225
A New Germ Theory 25
Alcoholic-Narcotics 250
Anchylosis of Temporo-Maxillary Articulation 176
Antipyrine 258
Antiseptic Value of Creolin 20
Aneurism by Anastomosis, of Orbits 149
Antiseptic Midwifery 42
Apomorphine for Children 282
Application for Membership in the Nebraska State Medical Society 16
Arsenical Poisoning, Antidote for 307
Assayed Preparations, A Plea for 158
Atresia Hymenalis, with Menstrual Retention 178
Atropine to Prevent Shock 47

B

Bacillus of Tubercle 28
Baccilli Tuberculosis, Their Etiological Role in Surgical Affections 317
Baron Larrey 116
Bishop Clarkson Memorial Hospital 56
Boiled Milk, Digestibility of 258
Brown-Sequard's Invigorator, by Himself 126

C

Cancer of Breast, Diagnosis and Treatment of 63
Carbuncles, Treatment of 121
Cervix Uteri, Amputation for Cancer 55
Chloride of Barium in Heart Disease 277
Chloroform and Ether 323
Chloroform Administration and the Hyderabad Commission, 300
Chorea and Epilepsy, Caused by Insufficiency of Ocular Muscles 205
Colectomy Versus Colotomy 19
Colorado State Medical Society, Meeting and Officers of . . . 90
Commencement of the Omaha Medical College 12
Committees of Nebraska State Medical Society 66
Concussion from Explosion of Giant Gunpowder 127
Coxitis 136
Credentials, Report of Committee on 67
Creolin, Antiseptic Value of 20
Creolin in Obstetrical Practice 257
Creosote in Treatment of Chronic Gonorrhœa 321
Croupous Pneumonia, Its Etiology 109
Cyanide of Zinc and Mercury as an Antiseptic 277
Cyst of Left Vocal Chord 21

D

Diabetes Mellitus 307
Diagnostic Conundrum 291
Diagnosis and Treatment of Cancer of Breast 62
Diagnosis of Diseases of Spinal Chord, Differential 313
Digestibility as a Test of Food Value 258
Diphtheria 282, 305
Diphtheria and Membranous Laryngitis, Treatment with Iodide of Sodium 238, 253, 320
Diphtheritic Croup 148
Discussion on Chills 87
Discussion on Dislocation of Shoulder 85
Discussion on Encysted Pyemia 116
Discussion on Epidemic of Typhoid Fever in Omaha . . . 29
Discussion on Intussusception 80
Discussion on Phantom Pregnancy 152
Dislocation of Shoulder, Old Case of 83
Dry Operations 253

E

Elastic Pressure in Mammary Inflammation 23
Election of Officers 75
Electricity in Gynecology 252
Elixir of Youth 122
Encysted Empyemia, Following Pleuro-Pneumonia 114
Epilepsy, Procursive 64
Epithelioma, Treatment of 127
Erysipelas 259
Etiology of Neoplasms 84
Excision of Hip 88
Excision of Neck of Inferior Maxillary 176

F

Foreign Body in Trachea, Toleration of 11
Fracture of the Femur 261

G

Gonorrhœa, Treatment of in the Female 48
Gonorrhœa, Its Relation to Salpingitis 45
Gonorrhœal Conjunctivitis, Pathology and Treatment . . . 211

Gout . . . 22
Granulating Wounds, Probing of . . . 16
Gunshot Wounds of the Intestines . . . 230, 242
Gynecology, Report of Progress in . . . 172
Gynecology and Male Sterility . . . 24

H

Hallus Valgus . . . 86
Heredity . . . 322
Hernia, Strangulated Femoral . . . 147
Hydrocephalic Fœtus . . . 15

I

Incubators, . . . 224
Infection Through the Unbroken Skin . . . 130
Inflammatory Diseases of Seminal Vesicles . . . 92
Inflammatory Diarrhœa in Children . . . 183
Inoculation for Texas Fever . . . 232
Inoculation of Disease as a Prevention of Disease, Present Aspect of . . . 99
Ingrowing Toe-Nails, Treatment of . . . 21, 307
Intussusception, Its Diagnosis and Treatment . . . 77
Immature Children, Care of . . . 179
Iodide of Sodium in Diphtheria . . . 221, 224, 320
Iodide of Sodium in Membranous Croup . . . 232, 238
Iodoform in Surgery . . . 328
Iodoform Poisoning and Bromide Potash . . . 259
Iowa State Medical Society . . . 56, 303
Irrigation of the Rectum . . . 24

J

Johns Hopkins Hospital . . . 154
Jugulation of Acute Diseases . . . 93

L

La Conveuse Fuerst . . . 179
La Grippe . . . 281
Laparatomy, A Case of . . . 51
Ligation of Common Carotid Artery . . . 149
Ligation of the Uterine Arteries in their Continuity as an Early Step in Total or Partial Abdominal Hysterectomy, 46
Life Insurance and Homœopathy . . . 188
Livingstone R. R., M. D., Biography of . . . 74
Livingstone R. R., M. D., Resolutions of Respect . . . 75
Livingstone, Dr. Theodore L. . . . 12
Loose Bodies in Joints, Antiseptic Removal of . . . 63
Lumbar Hernia . . . 228

M

Male Sterility and Gynecology . . . 24
Malpractice Case . . . 199
Mammary Inflammation, Elastic Pressure in . . . 23
Medical Society of the Missouri Valley, 17, 190, 226, 277, 280, 303
Medical Societies, Their Uses . . . 250
Medical Library in Omaha . . . 58
Medical Books in Public Libraries . . . 300
Membranous Dysmenorrhœa . . . 179
Members of Nebraska State Medical Society . . . 187, 213
Mental Depression and Uric Acid . . . 121
Metabolism and Jugulation of Fever . . . 211
Milton Lane, M. D., Death of . . . 154
Minutes of Nebraska State Medical Society . . . 67
Misconception . . . 21
Mississippi Valley Medical Society . . . 157
Modern Surgical Procedures . . . 129
Morphine Injected Subcutaneously . . . 193
Multiple Neuritis . . . 271

N

National Vices and Medical Responsibility . . . 279
Nebraska State Medical Society . . . 303
Nebraska State Medical Society, Applications for Membership . . 16
Nebraska State Medical Society, Circular from the Secretary . 17
Nebraska State Medical Society, Committees of . . . 66
Nebraska State Medical Society, Officers of . . . 66
Nebraska State Medical Society, Minutes of . . . 67
Nebraska State Medical Society, Proceedings of . . . 65
Neoplasms, Etiology of . . . 34
Nervous Affections Mistaken for Uterine Reflexes . . . 326
Neurasthenia, with Active Cerebral Hyperæmia . . . 180
Neuromatous Tumor of Median Nerve . . . 304
New Mode of Treating Tuberculous Processes . . . 61
Night Cries of Hip Disease Stopped by Flexing the Leg . . 327
Non-descript Epidemic, Report of . . . 97
Non-Strangulated Hernia . . . 228

O

Odor of Sound Meat . . . 120
Officers of Nebraska State Medical Society, 1889-90 . . . 66
Omaha Clinic . . . 91, 126, 300
Omaha Clinic Pocket Record . . . 226
Omaha Medical Club . . . 87
Omaha Medical College . . . 155, 188
Opprobium Medicorum . . . 212
Orbit and Upper Eye Lid, Aneurism of . . . 149
Osteo Myelitis . . . 304
Ovaries, Prolapse of . . . 62

P

Parametritis and Perimetritis . . . 235
Perityphlitic Abscess, Treatment of . . . 256
Phantom Pregnancy . . . 150
Phantom Pregnancy, Discussion on . . . 152
Phthisis, Treatment by Inhalation . . . 278
Pisos Consumption Cure, Poisoning by . . . 283, 320
Practical Points in the Administration of Ether . . . 284
Prevention of Shock by Atropia . . . 47
Pressure Forceps in Vaginal Hysterectomy . . . 18
Preventive Treatment of Communicable Diseases . . . 296
Probing for Granulating Wounds . . . 61
Proceedings of the Medical Society of the Missouri Valley . 17
Proceedings of the Nebraska State Medical Society, Twenty-First Annual Session . . . 65
Procursive Epilepsy . . . 64
Progress in Gynecology, Report of . . . 172
Progress in Obstetrics, Report of . . . 169
Prolapse of Ovaries . . . 62
Protracted Labor, Caused by Unruptured Hymen . . . 216
Prophylaxis of Tuberculosis . . . 25
Pruritis . . . 307
Public Medical Library . . . 56
Puerperal Eclampsia . . . 166, 309

Q

Quinine . . . 89, 123, 125, 154
Quadruplets, Birth of . . . 125

R

Rabies, a Case of . . . 218
Railroad Surgeons' Society of Nebraska . . . 58, 190
Rectum, Irrigation of . . . 24
Reduction of Subcoracoid Luxation Humerus . . . 255
Removal of Loose Bodies from Joints . . . 63
Resection of Hip-Joint Disease . . . 304
Report of Secretary . . . 69, 70
Report of Treasuer . . . 72
Report of Committee on Grievances . . . 72
Report of Auditing Committee . . . 72
Report of Special Committee on Dr. Daniels Bill . . . 72
Report of Committee on State Board of Health . . . 72
Report of Committee on Secretary's Report . . . 73
Report of Committee on Necrology . . . 73
Report on Progress in Obstetrics . . . 169
Report on Progress in Pathology . . . 209

doubtless consists of a poison generally derived from a pre-existing case, probably the *typhoid bacillus,* which has been found in the lymphatics, blood and tissues; but sometimes arising, as all contagious diseases did originally, from an equivalent poison, 'generated anew by the decomposition of sewage and of other forms of animal filth.' In either case the typhoid poison is reproduced in the system during the fever, and it appears that its chief, if not exclusive outlet, is in the intestinal discharges."

Such being the origin of the disease, it is evident that if this danger can be guarded against the disease will cease to exist. Thus the whole matter for the consideration of the Sanitarian, with respect to typhoid fever, is reduced practically to two questions: First, by what means do the stools of typhoid fever patients, or an equivalent poison, find access to the bodies of healthy individuals; and, secondly, by what means can the access of this poison be cut off.

A statement in full of the answer, which I believe to be the correct one, to the first of these questions, together with the evidence which may be offered in support thereof, would occupy many hours. I will therefore answer it by quoting from a number of authors, among whom are those who have done more than all the world besides to solve these difficult questions, and whose opinions must be accepted as final.

At the Congress of Hygiene, September, 1887, M. Brouardel opened the discussion on the mode of propagation of typhoid. "[*]Brouardel was sustained in his opinion that the vehicles for the transmission of typhoid fever germs were water, air, and clothing in contact with the sick; that the great source of the transmission of the disease was the pollution of drinking water."

[†]Dr. Edwin R. Maxson, LL.D., of Syracuse, N. Y., states: "The most common vehicle of the poison appears to be drinking water contaminated through sewage, either when drank alone or with milk, with which it has been mixed."

[*]Dr. Frank P. Foster, editor of the *New York Medical Journal,* remarks: "The water used for drinking is so commonly recognized as the chief vehicle of the germ of typhoid fever that even isolated instances in which it is evidently not at fault are of interest."

The eminent sanitarian, [†]Mr. Jas. C. Bayliss, states: "In country districts the germs of typhoid fever are most frequently communicated to the human system through drinking water drawn from wells and springs contaminated with impurities. This also occurs to a great extent in cities and small towns not provided with water works, and in which the inhabitants are dependent on wells necessarily sunk in close proximity to privy vaults, and cess-pools for the reception of house drainage."

[‡]The English Rivers Pollution Commissioners in their sixth annual report, remark: "The investigation of the epidemic of typhoid fever at Lauzen proves that very efficient filtration does not prevent the propagation of typhoid fever by water. Nothing short of abandonment of the inexpressibly nasty habit of mixing human excrement with our drinking water can confer upon us immunity from the propagation of epidemics through the medium of potable water."

[§]Dr. Henry B. Baker, Secretary of the Michigan State Board of Health, after speaking of other causes of typhoid fever, says: "That disease is not frequently traced to transmission through the air, but is frequently traced to the use of bad water."

[‖]Prof. V. C. Vaughan, Director of the Michigan State Laboratory of Hygiene, in concluding a report upon an investigation of suspected water, remarks: "There are on an average about one thousand deaths and ten thousand cases of sickness from this disease (typhoid fever) annually in Michigan. These figures can be greatly reduced if people will cease polluting the soil about their houses with slops, garbage, cess-pools and privy vaults, and will see to it that their drinking water is pure beyond all question.”

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[*] Sajous' Annual of the Universal Medical Sciences, 1888, vol. v, p. 252.

[†] Loco Cit.

[*] New York Medical Journal, Oct. 22, 1887.

[†] House Drainage and Water Service.

[‡] Treatment and Utilization of Sewage, Corfield, p. 296.

[§] Typhoid Fever and Low Water in Wells: Reprint from Annual Report for 1884 of the State Board of Health of Mich.

[‖] First Quarterly Report of the Mich. State Laboratory of Hygiene, 1888.

A [*]circular published by the State Board of Health of Illinois contains the following statement: “Where there is a polluted water supply, where there is undrained ground, contaminated with excremental filth, where foul overflowing or leaky privy vaults soak the earth for rods with their contents, where defective, unventilated sewers and ‘skin’ plumbing abound, there does typhoid fever find its most numerous victims. From such localities the contagion, finding its way by various unsuspected channels, may invade the most cleanly and carefully ordered household. The frequent mode by which it is spread is through the water supply. A small quantity of the infectious matter of the disease is sufficient to poison the contents of a well or cistern and thus to give rise to an outbreak among the susceptible who depend upon such source of supply. Or this may, as has frequently been proven, be used for dairy purposes, and so introduce the infection into families supplied with milk from such dairy miles away from the source of danger.”

In a [†]document issued by the Michigan State Board of Health in June of last year, concerning the prevention of typhoid fever, is the following: “Water chemically pure does not necessarily cause the disease, but drinking water contaminated with the fecal discharges of a typhoid fever patient is believed to be the most common source or vehicle of typhoid fever. While the possibility of its originating in other ways is not denied, the frequent outbreaks of this disease which are traceable directly and unmistakably to a contaminated water supply, seem to point to this as the chief source of danger. The disease has also been traced to milk diluted with infected pump water and apparently to emanations from sewers and cess-pools.”

As long ago as 1879 the statement is made in the Annual Report of the State Board of Health of Massachusetts, that, “So far as Massachusetts is concerned impure water is one of the most common sources of infection from typhoid fever.”

Dr. George Wilson, Fellow of the Sanitary Institute of Great Britain, etc., [*]says, in speaking of typhoid fever: “Although there are still some who do not believe in the communicability of the disease, there is a constantly accumulating amount of evidence which goes to prove not only that the poison of the fever may be conveyed through the agency of water from the sick to the healthy, but that this is the most common mode of propagation. Sir W. Jenner (he further states), than whom no higher authority could well be quoted, in commenting upon this point, says: ‘The spread of typhoid fever is if possible less disputable than the spread of cholera by the same means. Solitary cases, outbreaks confined to single houses, to small villages and to parts of large towns—cases isolated, it seems, from all sources of fallacy—and epidemics affecting the inhabitants of large, though limited localities, have all united to support by their testimony the truth of the opinion that the admixture of a trace of fecal matter, but especially the bowel excreta of typhoid fever, with the water supplied for drinking purposes, is the most efficient cause of the spread of the disease, and that the diffusion of the disease in any given locality is limited or otherwise, and just in proportion as the dwellers of that locality derive their supply of drinking water from polluted sources.’”

In the [†]report in November, 1888, of the committee on the pollution of water supplies, appointed by the American Public Health Association, is the following statement: “In the records of Sanitary Science are to be found many epidemics of typhoid fever chargeable to wells that have become contaminated by sewage. Indeed, the more the transmission of typhoid fever is studied, the more evident is it that the water supply is the main agency concerned in its propagation. Hence sanitary officers have not only closed up wells into which sewage has entered, but those which from their situation are merely exposed to this danger.”

I might go on almost indefinitely with this line of evidence, but enough has been said, and the answer to my first question, By what means do the stools of typhoid fever patients or an equivalent poison find access to the bodies of healthy individuals? must be apparent to all. Barring exceptional cases, it is by means of polluted drinking water. So that we must conclude that there is in use by a large number of the citizens of Omaha a polluted drinking water, and that if this practice could be stopped we would have no more deaths from typhoid fever to record. Can we discover the source of this death-dealing fluid? We shall see.

---

[*] Ill. State Board of Health Preventable Disease Circulars, No. 4.

[†] Prevention of Typhoid Fever.

[*] Handbook of Hygiene, fifth edition, p. 208.

[†] Reprint for the Michigan State Board of Health, p. 13.

With the facts in mind to which I have thus far called attention, it was at once apparent that my task of locating the evil sought and the responsibility therefor, lay in the direction of a study of the water supply of Omaha and its relation to the sickness and deaths in question. To this end I procured from the records of the Board of Health a list of the names of all the persons who had died from typhoid fever during the last six months of the year 1887, ninety-six in number, together with the address at which the death had occurred, and such other data as the records furnish. This done, I set about the laborious task of making a personal inspection of the premises where each death had taken place. I made note of the source of water supply and the possible sources of contamination of the same, and also the general condition of the premises with respect to sanitation.

At the outset I was met by a very serious obstacle in the inaccuracy of the addresses given. Many were indefinite, many absolutely wrong, and a few were not given at all. Moreover, the fact that a year had elapsed since the sickness occurred rendered the difficulty in tracing the cases greater. And just here I desire to respectfully urge upon our Board of Health the necessity of adopting measures to secure a full and accurate report of all deaths occurring in the city. The chief merit or demerit of any statistics lies in the degree of their accuracy.

The following are the results of my investigation: The whole number of deaths which occurred during the six months was ninety-six. In my opinion, and I suppose that of most of those whom I address, the typhoid poison is just as truly a causative agent in the production of those cases called "typho-malaria" as in those called simply typhoid. Though, to avoid any ground for dispute, I have omitted these, were they included it would bring the entire number of deaths up to one hundred and ten. Of the ninety-six, fifty-four were males and forty-two females. The average age was twenty-three and one-half years, about. There were thirty-four native to the United States, and fifty-nine foreigners, and three not specified. The deaths occurred, in July, thirteen; August, twenty-eight; September, twenty-two; October, twenty-one; November, seven; and December, five. Of the ninety-six cases, thirty-five died in St. Joseph and the Child's hospitals. As neither of these institutions preserves a record of the former residence of their patients it was impossible to trace them. Of the remaining sixty-one cases the address in seven was so incorrectly given that I found it impossible to find a clue to them, though neither time nor labor was spared in an effort to do so. There were, therefore, only fifty-four remaining of the whole ninety-six whose former residence I was able to examine. It will be observed from the above statement that there was no opportunity for the exercise of a prejudice in the selection of cases.

In forty-seven cases, in which the sanitary condition exclusive of water supply was noted, it is marked bad in one, fair in five, and good in forty-one. Of the fifty-four cases the water supply in three was from cisterns, in four from the public supply, and in forty-seven from wells. The alleged quality of the well water is noted in forty-five cases. It was in thirty-eight good, and in seven suspicious or bad. Aside from the fatal cases, I have learned of seventy-nine other cases of typhoid fever among those using the water from twenty-two of these wells. In the case of eleven of the wells, a history is given of sickness among those using the water; from diphtheria, a large number of cases, quite a number of which were fatal; from malaria and typho-malaria, a great number of cases; and from bowel troubles and other more or less ill-defined symptoms, very many cases.

Of the cisterns referred to, one had no cover, and at the time of inspection contained but little water, with sticks and other rubbish floating in it, probably thrown there by a number of neglected children who were playing about. The other two appeared to be fairly well cared for, but it is worthy of note that in each of these families there was another case of typhoid fever at the same time. They were all cement cisterns, which are very liable to contain cracks through which soakage from without may pass and mix with the contents of the cistern. Of the cases where city water was used, No. 1 was a girl of seventeen, who slept in a room through which passed the soil pipe from the closet above, and this was defective, as was shown by an offensive odor whenever the house was not ventilated. Her brother had a mild attack of the disease afterward. No. 2 was a woman of thirty-five, who occupied a flat above a store. At the rear of this all the garbage, waste water and human excrement of the families in the row was thrown, thus creating such a stench that at least one tenant on the lower floor moved out on account of it. From the information gained I am unable to offer any explanation of the mode of infection in the other two cases. I am aware that there are many who will pooh-pooh the idea that in the remaining cases the wells have been the cause of the sickness and deaths. I am aware, also, that I am unable to offer an absolute demonstration that this is true; but is not this alone a significant fact, in view of the testimony which I have presented respecting the usual mode of transmission of the disease, that of the fifty-four cases examined the *city water was used in only four?*

Space will not permit me to relate specifically each of the fifty cases in which the city water was not in use, but of many in which the clinical evidence was very convincing I will mention as an example the following: A dressmaker on the premises employed eight women. Her own family consisted of three persons—eleven all told. From the surroundings of the well she judged the water to be unfit for use, and used, for drinking and cooking, melted ice which she bought for that purpose. Six of the employees also drank the ice water, but two of them, believing the well water to be better, drank this. Both of these were taken sick and died from typhoid fever. None of the others took the disease. Among those using this well there were at least thirteen other cases of typhoid fever.

It might be mentioned in this connection, that the proprietor of the dressmaking house asked of the landlord the privilege of putting in, at her own expense, the city water, which was in the street upon which the property fronts. This he refused on the ground that the other tenants, depending upon the well, would also demand city water and this would cost too much money.

It is well known that it is for the most part among the less wealthy people of our city that wells are in use. I fancy that some one may seek to shield the wells by attributing this peculiar distribution of the fatality from typhoid fever to inferior attendance and nursing which the sick among poor people are likely to receive. I will answer this objection only by the following quotation* from the exhaustive article of Dr. James H. Hutchinson, of Philadelphia: "The rich are not only as liable to contract typhoid fever as the poor, but the disease is also quite as fatal among them. Murchison found from the statistics of the London Fever Hospital that the mortality is not greater among the destitute than among the better class of patients, and expresses the opinion that in private practice enteric (typhoid) fever is probably more fatal among the upper classes than among the very poor. Chomel and Forget seem to have reached a similar conclusion."

Being desirous to test Omaha's water supply by actual analysis, and that by a chemist of such acknowledged ability and reputation that his conclusions could not be gainsayed, I corresponded with Prof. Victor C. Vaughan, director of the Michigan State Laboratory of Hygiene, at Ann Arbor. Through his interest in the subject in hand I am enabled to present a report of ten analyses by him. The samples were collected by myself, care being exercised to get a fair specimen of each. From each source of supply a new one-half gallon glass demijohn was filled, stoppered by a new cork and hermetically sealed. These were labeled by number.

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*Pepper's System of Medicine, Vol. I, p. 320.

They were taken from the vicinity of the following places: Nos. 1 and 2, Cuming and 20th st.; No. 3, Vinton and 11th st.; No. 4, Martha and 13th st.; No. 5, Grace and 22nd st.; No. 6, Charles and 18th st.; No. 7, Marcy and 7th st.; No. 8, Dodge and 17th st.; No. 9, Davenport and 10th st., and No. 10 from the hydrant of the City Water Co., in my own house, without filtration.

Prof, Vaughan writes as follows:

REPORT ON ANALYSES OF WATERS SENT FROM OMAHA BY PROF. W. F. MILROY, M. D.

I. CHEMICAL ANALYSIS.—In all the waters the free ammonia, albuminoid ammonia, chlorine, nitrites, nitrates and hardness were determined with the following results:

No.	Free Ammonia.		Albuminoid Am'nia		Chlorine.		Nitrites.	Nitrates.	Hardness.
	Parts Per Million.	Grains Per Gallon.	Parts Per Million.	Grains Per Gallon.	Parts Per Million.	Grains Per Gallon.			Clark's scale
1	.168	.0098	.118	.0069	129	7.523	None.	Good test.	33
2	.08	.0047	124	.0072	97	5.656	"	"	33
3	.664	.0387	.230	.0134	12	6 998	"	None.	31
4	.162	.0098	.116	.0068	45	2.624	"	Good test.	88
5	.094	.0055	112	0065	23	1.341	"	Slight trace	23
6	.028	.0016	.099	.0058	34	1.982	"	Good test.	28
7	.022	.0013	.102	.00595	48	2 799	"	Trace.	83
8	.172	.0100	.088	.0051	48	2.799	"	Good test.	38
9	.054	.0032	.068	.00397	98	5.715	"	"	34
10	.032	.0019	.096	.0056	8	.4665	Distinct trace.	Trace.	18

No absolute standard for the chemical purity of water can be given, but good authorities agree upon the following rules:

(1.) The chlorine ought not to exceed ten parts per million.

(2.) The free ammonia ought not to be more than .05 part per million.

(3.) If .10 part of albuminoid ammonia is present the water should be regarded as suspicious.

(4.) The presence of .15 part or more of albuminoid ammonia in a million ought certainly to condemn the water.

Judging the waters by these rules we must conclude:

(*a*) According to the first rule, all the waters except No. 10 should be condemned as drinking waters.

(*b*) By the second rule, all save 6, 7 and 10 would be excluded.

(*c*) By the third rule, all save 6, 8, 9 and 10 would be excluded.

(*d*) No. 3 is the only one which exceeds the limit given in the fourth rule.

In concluding from the sum of the evidence furnished by the chemical analyses we may, I think, decide that No. 10 is the only good water among the samples examined.

II. BACTERIOLOGICAL EXAMINATION.—Plate cultures were made, and the number of colonies counted, and pure cultures made from the plates.

A. The number of bacteria in a drop of each kind of water.

No. of sample	1	2	3	4	5	6	7	8	9	10
No. of colonies in a drop	50	46	120	50	26	18	18	86	20	8

B. Nature of the bacteria.

We have found the following germs: (1.) Liquefying bacillus, present in all the samples. It is a short, thick rod with rounded edges. It is not pathogenic.

(2.) Greenish—yellow bacillus, small fine rods, which liquefy gelatin rapidly—found in No. 4. It is non-pathogenic.

(3.) Micrococcus candicans—found in 1, 3 and 4. It does not liquefy gelatin, and is not pathogenic.

(4.) A gas forming bacillus; a small rod, very motile, liquefying gelatin and non-pathogenic.

(5.) A fluorescing bacillus; a short rod with rounded ends, does not liquefy gelatin and is non-pathogenic.

Besides these we have two germs, one from No. 2 and the other from No. 4, which we have not as yet been able to identify with any known germ. These we will study farther.

I can send you cultures of the germs isolated if you desire them. V. C. VAUGHAN, M. D.,

Director of the Michigan State Laboratory of Hygiene.

While it is true that these wells were selected from premises upon which typhoid fever had occurred, a year had elapsed after the occurrence of the sickness before the specimen was taken, and we would therefore expect to find in the water only those elements which are its usual constituents. Furthermore, it is of the utmost importance to bear in mind that these wells were not selected as being those most befouled, but were estimated to be a good average of all those examined. And I must add that, so far as I am able to conclude after extended observation and study of the matter, these wells are no worse than hundreds upon hundreds of other wells that are now in daily use in Omaha and highly esteemed for their excellence.

When objection is made to the water of a well, the reply will often be heard: "I will have the well cleaned out immediately," thinking that thus the evil can be remedied. This is a false notion that is very widely received, and in order to call attention to this point, well No. 1 was chosen because it had been "thoroughly cleaned out" only three weeks prior to the taking of the sample; and No. 6 was cleaned only three days prior to taking the sample, and yet both of these wells are excluded by the chemical analysis, and No. 1 by each of the rules save the last.

It is by many erroneously supposed that if a well have sufficient depth all danger of contamination is eliminated. To illustrate the falsity of this position I selected No. 3, a well that is upwards of 130 feet deep. The analysis shows it to be the worst of all, being condemned by every rule.

The nearest neighbor to well No. 1, counted not less than twenty families who are supplied with water from this well, it being considered the best in the neighborhood, and yet its analysis condemns it by every rule save the fourth. The occupant of the house nearest well No. 8 stated that there is scarcely a time in the day when someone is not drawing water from it, but by two of the four rules it is condemned. The owner of No. 4 stated that a great many people use the water from it, but all the rules save the last condemn it. I have chosen these wells to show that it is an error to suppose that the use of an abundance of water from a well is a guarantee of its good quality.

In every instance, with the exception of Nos. 3 and 7, the wells examined were thought to contain the best of water. It is a fact that cannot be too strongly emphasized that the *taste and appearance of a water furnish no guide whatever as to its quality* for drinking purposes, even when sewage is present in large amount. The very elements which prove to the chemist that a water is dangerous, also contribute to that water a peculiar sparkling brilliancy and in many cases also an agreeable taste. This may be a hard blow to the fancied security of many, who will tell you that "Our well has splendid water; just as clear and sweet as can be." And yet we dare not stop even here.

The committee appointed by the American Public Health Association, on the pollution of water supplies, in its *report read at the annual meeting of that association at Milwaukee in November last, says: "We acknowledge that typhoid fever is propagated by an infected sewage in a well water when all organic trace of the sewage has disappeared through the instrumentality of the agencies referred to. [Chemical and biological changes.]

"There are two kinds of organic matter in the dangerous sewage—matter which, by the absence of life, is given up to decomposition and reduction to harmless inorganic forms; and matter which, by its vitality, is preserved from these influences; and we acknowledge that in the well water the former may be reduced, while the latter retains the full measure of its virulence."

Elsewhere, referring to its last annual report, the committee says: "Chemical analysis was shown to be, in most instances, inadequate to the detection of sewage, unless the sewage was present in unusual quantity, or the water unusually free from other organic matters; and the conclusion was reached that the inability of the chemical methods is of no practical importance, as the presence of sewage in the water supply can be determined by the sanitary inspector; and, further, that for protective purposes the knowledge that sewage enters the water is all that seems to be required, because where there is sewage there is danger of typhoid infection. Your committee desires to give special emphasis to the last stated clause, because it believes that the endemicity of typhoid fever in our cities is in great part due to the sewage in water supply."

Upon this question, Dr. Charles Smart, Major and Surgeon U. S. Army, makes the following *statement: "Usually in such wells (those contaminated by typhoid excreta) the sewage inflow is so great that the chemical results show an undesirable contamination; but in many instances the inflow is so small, or the purifying influence of the percolation through the soil is so great, that the infected water may give a fairly good showing on its analytical record. In other words, the quantity of infected sewage necessary to the spread of typhoid by a well water is so small as to evade detection by chemical methods; or the influence of a filtration, which effects the destruction of ordinary organic matter, leaves the specific poison unaffected and in full potency. So well are these facts recognized and acknowledged, that the health officers of many cities, having a trustworthy general supply, have not hesitated to close up the wells within their jurisdiction."

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*Reprint for the Michigan State Board of Health.

*Annals of Hygiene, March, 1887.

Prof. Chas. F. Chandler, of Columbia College, *says: "As a rule there is but little faith to be placed in analyses of well water if there is reason to suspect that the water is contaminated. I myself never feel like assuring a man that, because I find his water in a fair condition, he is safe from typhoid; it may be that at the time his water may be good, but the next week it may be bad. So much depends upon the state of the soil, the level of the cesspool, the season of the year, and so forth, that it is always rather against my conscience when I tell a man that his well is safe."

It will be worth while in this connection to give attention to some of the circumstances under which it is possible for wells to become contaminated.

In 1880 the National Board of Health inaugurated an elaborate series of experiments to determine the filtering power of various kinds of soils. Owing to the action of Congress they were discontinued in the summer of 1882, though far from completion. Nevertheless, valuable work was done. The following is from the report† of this Board. "From these results it appears very clearly that sand interposes absolutely no barrier between wells and the bacterial infection from cesspools, cemeteries, etc., lying even at great distances in the lower wet stratum. * * * At this point in our work it seems as though the filtering capacity were wholly dependant on the size and intricacy of the interstitial cavities; and that in the dry-air filters there is a critical limiting point, beyond which there is no filtering. And the same remarks seem to be true in different degrees with regard to the filtration of liquids. Here far greater fineness and compactness of grain and intricacy of passage are needed than are requisite for air filtration. While sand of 20° is an excellent air filter, sand of 100° in long columns is worthless for water, and the critical limiting point below which soils begin to exercise any filtering action probably verges on the size of grain of an impalpable powder."

Farther on this *report states as follows: "It would appear that the first inference from these experiments is that no substance sufficiently porous to allow of the passage of water can eliminate spores or bacteria from that water, even when moving upward by capillary attraction. There is no current so gentle that it can not buoy these infinitesimal bodies."

After a discussion on the subject of filtration which time does not allow me to reproduce, the committee of the American Public Health Association on Pollution of Water Supplies in its report in November last, uses these words:† "Since natural filtration is powerless against the infection of typhoid it is evident that artificial methods can give no guarantee of protection."

The Illinois State Board of Health says:‡ "The contaminating distance varies according to the nature of the soil and the depth of the well; in a loose, porous soil a well 30 to 40 feet deep will be dangerons if within 100 feet of typhoid premises."

According to experiments made by Prof. Victor C. Vaughan,§ "The excretion from one adult person's kidneys would be sufficient to poison one cubic foot of soil for that width if you had any water passing through it. Now with these facts we can easily estimate the time that any ordinary family with privy vaults would take to furnish enough effete matter to thoroughly permeate all the soil for a distance around it. The time would not be very long to render thoroughly impure every cubic foot of soil in the yard."

The same investigator examined samples of soil in the neighborhood of a privy vault issolated from other sources of contamination. The samples were taken from a point

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*Women, Plumbers and Doctors, p. 78.

†Annual Report of the National Board of Health, 1882, p. 582.

*Loco Cit., p. 591. †Loco Cit.

‡Preventable Disease Circular, No. 4.

§Supplement to the Annual Report of the Michigan State Board of Health for 1886.

three feet below the surface, and in his own words:[*] "Without going into details, suffice it to say, that the contamination of the soil from that single privy, built upon nearly level ground, could be detected 50 feet from the vault, plainly."

Prof. Chandler, of New York, in his laconic way, says:[*] "You may take it as a rule that unless your cess-pool is as tight as a bottle the sewage will find its way to your own or your neighbor's well."

Prof. James H. Shepard, now chemist to the Dakota Agricultural College and Experiment Station, writing at Ypsilanti, Mich., [†]remarks: "I venture to say that not one person in fifty knows at what distance he lowers the level of the ground water when he lowers the water in his well by excessive pumping. It has been demonstrated that in soils somewhat similar to ours the level of the ground water is lowered for a distance of 200 feet in all directions from the well, while under the most favorable conditions the circle of influence may have an influence of over 2,000 feet. (Nichols Water Supply, pp. 109–114.) Now, for the sake of illustration, let any owner of a well in this town take a line 200 feet long, and with his own well as a centre, let him strike a circle, then let him count the privy vaults, old and new, cesspools, old and new, and all other sources of pollution within the circle; then he may know, approximately, upon how many reservoirs of death he is drawing when he works the handle of his pump."

The soil on which Omaha is built must be even more easily penetrated than that referred to by Prof. Shepard, and the diameter of the circle he describes consequently greater.

The soil of Omaha is a rather rare geological formation known as Loess. Of it Prof. Samuel Aughey, formerly State Geologist of Nebraska, [‡]says: "Its drainage, which is the best possible, is owing to the remarkably finely comminuted silica of which the bulk of the deposit consists. Where the ground is cultivated, the most copious rains percolate through the soil, which in its lowest depths retains it like a huge sponge. When droughts come, the moisture comes up from below by capillary attraction." However, there is no scientific knowledge necessary to realize the remarkable facility with which water passes into the ground, as we see it all around us.

In a paper published in the *New York Medical Record* of October 29, 1887, I called attention to the great advantage afforded by a soil, possessing such rare qualities of drainage, in reducing the rate of sickness and mortality from consumption. In the present study, on the contrary, the opposite position must be taken. This property of soil, when rightly guarded and utilized, is a boon that few localities enjoy and no art of man can supply. But let disease breeding centers in the form of privy vaults and cesspools be scattered thickly through it and this perfection of drainage, which ought to exert so salutary an influence upon the health of the community, becomes, by so much, an additional danger wherever wells are used. The distance that filth may travel to a well and the certainty of its reaching it is, by so much, increased.

From the foregoing testimony I have carefully excluded all save that which is admitted to be authoritative upon the points at issue, and the conclusion is to my mind unavoidable: (1.) That the great majority of the wells in the city of Omaha have sewage draining into them; (2.) That no possible filtration, which this sewage may receive by passing through the soil from its source to the well, can remove from it its dangerous and perhaps fatal qualities.

The question is naturally suggested: "What was the reason of the unusual outbreak of typhoid in 1887?"

The mortality records give the number of deaths from typhoid fever in Omaha year by year, as follows: In 1880, 20; in 1881, 33; in 1882, 32; in 1883, 17; in 1884, 17; in 1885, 17; in 1886, 18; in 1887, 103, and in 1888, 56.

In 1869 Prof. Pettenkofer clearly established the fact of a rythmical variation in Munich of the death rate from typhoid fever to correspond to the height of the ground-water, *i. e.*, high ground-water with low death-rate and low ground-water with high death-rate.

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[*] Loco Cit.

[†] Supplement to the Annual Report of the Michigan State Board of Health for the year 1885.

[‡] Sketches of the Physical Geography and Geology of Nebraska, 1880.

From a vast accumulation of evidence Pettenkofer showed that the mathematical probability was as 36,000 to 1 that there existed a causal relation between the low ground-water and the increased typhoid.

In October, 1884, Dr. Henry B. Baker, Secretary of the Michigan State Board of Health, read a paper* before the American Public Health Association at its meeting in St. Louis. In this admirable essay Dr. Baker clearly demonstrated that in Michigan the same relation exists of the ground water to typhoid as was pointed out by Prof. Pettenkofer. Dr. Baker, however, accounts for this causal relation upon a different theory from that proposed by Pettenkofer, viz: That it is the low water in wells to which it is attributable. His exceedingly interesting argument I have not space to reproduce. To me, his conclusion appears unavoidable, that the increased typhoid rate which accompanies a fall in the ground-water, is brought about directly through the accompanying fall of the water in the wells, chiefly by producing greater concentration of the sewage therein. It will be seen at once that this theory is not out of harmony with the supposition that the wells were the main cause of the typhoid fever in Omaha in 1887. But if it be true, as I allege, that this outbreak was caused by the wells, and if it is also true that Dr. Baker's theory is correct, we would expect to find a marked lowering of the water in the wells during that year. Now, there having been no measurements taken with reference to this point, so far as I am aware, I have consulted the records of the U. S. Signal Service for light upon this matter. Through the courteous assistance of the Observer at the Omaha station, Mr. L. A. Welsh, I have ascertained the following facts:

1. The normal (average) annual rainfall at this station, computed from the observations of sixteen years, is 35.73 inches.
2. During the last nine months of 1886 there was a deficiency of 13.03 inches, equal to 36½ per cent. of the normal for the whole year.
3. During 1887 there was a deficiency of 15.83 inches, equal to 44 per. cent of the annual normal, or almost one-half. In other words, during this year and three-quarters of the preceding one, the amount of precipitation fell short of the usual precipitation for that period by about thirty inches. Thus, though not a well was measured, there can be no doubt that so prolonged and severe a drought must have very decidedly lowered the water in the wells; and the delectable sewage mixture must have been proportionately concentrated, as explained by Baker.

In conclusion, it must be admitted that typhoid fever is absolutely controllable and preventable, and that, in the light of the present day, its occurrence, unless it be in isolated instances, is a reproach to the community which suffers by it.

If the excuse of ignorance has heretofore carried any merit, I trust that I have been able to put that aside.

And yet, however much we may proclaim the danger in such insanitary conditions there will be many who believe that by their own unaided intuition, they are so wise that all the research and experience of a quarter of a century, conducted by the most earnest and scientific workers, can teach them nothing. Such persons will go on drinking poison until they are stricken down by the ghastly fever, and then they will blaspheme a good and merciful God by ascribing to "a mysterious Providence," that which is a direct result of their own criminal ignorance. A popular doctrine of such individuals is briefly stated and answered by Prof. J. H. Shepard as follows:* "That these Boards of Health and Water Analyses, etc., etc., are simply new-fangled crazes, which are untrustworthy and soon doomed to decadence."

With us, alas, they are new-fangled, but for any one to denominate them as crazes is simply to expose his ignorance. Go to Germany, England, or France and ask if these are crazes. We are simply ignorant of their value, and may God shield us from knowing their value by passing through the horrors of the plague. The water supply of such cities as London is daily subjected to analyses to determine its purity, while the mandates of the health officers in plague-stricken Europe are more absolute than those of the king.

If I might venture to make a suggestion,

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*Typhoid Fever and Low Water in Wells.

*Loco Cit.

I would respectfully urge upon our Health Board the prompt adoption of energetic measures for the remedy of this evil. Many towns having such a difficulty as this to overcome have been brought face to face with the problem of securing an adequate and pure public water supply, which could only be done at enormous expense. But this we are spared, for such a supply is already flowing through the mains in our streets.

The only obstacle, then, to the removal of this menace, which daily threatens with typhoid fever every man, woman and child in Omaha, who has not had the disease, is the expense attendant upon filling up wells and introducing the public supply.

In 1887 there were not less than 1,000 cases of typhoid in Omaha, and over 80 per cent. of these were persons in the self-supporting period of life. If these were disabled from work an average of sixty days each, and were each capable of earning one dollar per day (both low estimates), the actual loss of time, without regard to the unprofitable labor of nursing, expense of physician, medicines, etc., amounted to $57,600. Saving money by drinking sewage is a form of economy which no community can afford. Let information upon this subject be disseminated among the people. Provide for the inspection and chemical examination of their wells and many of the people will voluntarily close them. But to enjoy life is a privilege guaranteed to every citizen, by the constitution of the United States, and wells which are a menace to the lives of the community should be closed by the power of law when this power must be invoked to accomplish that end. So shall valuable lives be saved to the city and the world, and a reproach be removed from the fair name of Omaha.

CASE OF TOLERANCE OF FOREIGN BODY IN TRACHEA FOR 14 MONTHS.—OPERATION.—RECOVERY.

By R. T. Daily, M. D., Nebraska City, Neb.

On January 27, 1888, while sucking a *beef rib*, A. N., aged 10 months, "sucked" into the trachea a spicula of bone, irregular in shape, with sharp, jagged edges, about 6 lines in length by 4 lines in width, 1-32 of an inch thick. The immediate result was spasm of the larynx very severe, but tolerance was established, and for fourteen months the symptoms were: — difficult *inspiration*, croupy cough, only varied in *degree* during an exacerbation of the symptoms (which exacerbations were frequent). The child could not sleep, being obliged to make use of the voluntary muscles to overcome difficulty of *inspiration*. Child became greatly emaciated.

On March 27, 1889, I performed laryngo-tracheotomy, and found the piece of bone just below the larynx in the trachea, and inasmuch as the symptoms were so constantly the same am inclined to think the bone never changed its position during the entire time (fourteen months).

My little patient has made a good recovery and is now almost well. In view of the character of the foreign body, the length of time, the age of the subject and the success of interference, I think the case worthy of record.

Review.

A Handbook of Therapeutics, by Sidney Ringer, M. D. Twelfth edition. William Wood & Co., 56 and 58 Lafayette Place, New York.

The above is a work on clinical therapeutics, dwelling more on the indications for the use of drugs in disease than on their physiological action. The twelfth edition of this popular work is a careful revision of the old throughout. In fact, one can scarcely recognize the old acquaintance in its new dress. Much fresh information has been added on new as well as old drugs. The best and most valuable portion of the text is to be found comprised within the first eighty-five pages. In no other work of the kind can one find more practically useful information on the *tongue, pulse, skin, temperature, etc.*, in health and disease than is herein contained. All of the various kinds of baths of every character and description are exhaustively considered, including cold, warm, hot, sitz, shower, douch, sponge and Turkish baths. In addition to the old remedies there have been incorporated new remedies, such as salol, antipyrine, phenacetin, stropanhthus, convallarin, adonidine, etc. The index to diseases is a model of its kind. We can most heartily recommend the book to student and practitioner alike. The publishers are to be commended on the appearance of the book, which is an improvement on the old. J. C.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

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1110 Farnam St., Omaha, Neb.

OMAHA, APRIL, 1889.

DR. THEODORE P. LIVINGSTON has been appointed surgeon-in-chief of the B. & M. R. R. in Nebraska. We congratulate the Doctor in securing such an honorable place, sought for by many older heads. We also congratulate the Omaha Medical College that another of her graduates has come to the front on his own merits.

WE CALL especial attention to the letter of Secretary Mansfelde in this number of the CLINIC, on Society membership. The Secretary makes his points very clear, and there is no question of his having the constitution of the Society to back him. Full power is given the committee by that instrument to demand satisfactory credentials, before candidates can be admitted to membership.

THE Annual Meeting of the National Association of Railway Surgeons will be held at St. Louis, Mo., on Thursday and Friday, May 2d and 3d, 1889.

The prospects are that this will be one among the largest gatherings of medical men ever assembled in this country.

Dr. W. B. Outten, of St. Louis, is the Chairman of the Committee of Arrangements, and everything will be complete for the accommodation of the surgeons.

Any information desired can be had by addressing the Secretary, C. B. Stemen, M. D., Fort Wayne, Ind.

SUBSCRIBERS will find accompanying this number of the CLINIC a complete index to Vol. I, which ended with March. We now begin a new year, which is a good time for those to subscribe who have neglected to do so, or who have been waiting to see how the CLINIC was going to turn out. We think it has done well, and from the commendations received from various sources, many agree with us. The profession may rest assured that THE OMAHA CLINIC has come to stay, and if any improvement can be made, no pains will be spared to secure it. We thank those friends who have so far assisted us, and again urge the co-operation of all others who wish to help maintain a medical journal in this region, and at the same time give others the benefit of their experience.

COMMENCEMENT OF THE OMAHA MEDICAL COLLEGE.

The Eighth Annual Commencement of the Omaha Medical College, was held in Boyd's Opera House, Wednesday afternoon, the 27th of March. Prof. McKenna, President of the Board of Trustees, conferred the degree of Doctor of Medicine upon the following seven young gentlemen: F. L. Burbank, C. E. Coffin, E. D. Cummins, F. A. Graham, A. P. Haynes, W. F. Mason and G. A. Gates.

Notwithstanding the exercises were held at a busy hour of the day, the faculty must have been highly gratified at the large attendance of appreciative citizens.

The usual music by the orchestra, contribution of boquets, applause and congratulations marked the occasion. The prize offered by Prof. Gibbs for the best physiologist was won by W. F. Mason.

Only one set address was made, and that by Rev. J. T. Duryea, D. D., now pastor of the First Congregational Church, Omaha. As the Doctor is an off-hand speaker, he had no manuscript copy, and we shall, therefore, make no attempt to give even a synopsis of his remarks. He spoke in his usual happy, entertaining and convincing style. Having himself been educated for a medical doctor, and having been associated all his life with the purest and most noble of that profession, his hearers must have been greatly impressed, and we hope were profited.

He approved of the founding and maintaining of medical schools, as the "centres of intellectual life and development, from which the inspiration of higher and nobler life goes out to all the homes in the land." He encouraged the faculty, who, although not always appreciated for their labors and struggles, were, nevertheless, the fountain source whence came the living streams from which we drink. He threw hot-shot into the camp of the "christian scientists," as a revival of ancient heathenism, and severely rebuked those who would exchange their faithful family doctor for one with a "cork head," whose only recommendation was a flaming show bill on the side of a fence; and he paid a high tribute to the "pure and undefiled" in this noble and useful profession. We think the faculty should give the Doctor a rousing vote of thanks.

TYPHOID FEVER.

The question of water supply for the inhabitants of cities is one of great moment, particularly with reference to the liability of its contamination with various products inimical to health and as a carrier of pathogenic microbes.

At the last meeting of The Medical Society of the Missouri Valley, an interesting and instructive paper* was read, embodying a very painstaking and exhausting study of an epidemic of typhoid fever in this city during the year 1887, with special reference to the relation of water supply to the etiology and propagation of the disease in the community. The writer, as far as practicable, made a personal investigation of every fatal case reported to the City Board of Health, and found that only a very small per centage were in the habit of using city water, while the large majority derived their water supply from wells.

The author of the paper above mentioned spent much time, labor and thought in ferreting out all the facts about the water supply and the character of the water used. His results are additional corroborative evidence to what we already possess, tending to prove that the typhoid microbe is usually conveyed into the system by means of drinking water.

* * * * * * * *

Typhoid fever belongs to that class of febrile diseases due to the presence of specific microbes. The typhoid bacillus is usually eliminated from the infected person in the foecal discharges in an inactive state; before it is capable of reproducing the disease in other persons it undoubtedly requires certain favorable conditions found more complete in its passage through soil, into water, and by the latter carried into the intestinal canal, where, if it finds lodgement in a suitable resting place favorable to its further growth and multiplication, it proceeds to the specific form of fever, known as Typhoid or Enteric fever.

* * * * * * * *

The problem which presents itself to us for a practical solution is this: How can we best limit the occurrence of typhoid fever to a minimum?

If the above theory of the disease be true, the answer is quite obvious. The disease should be classed among the contagious and infectious diseases, and hence all cases should be reported to the Board of Health. In large and closely built cities and in many smaller communities, all wells should be closed by law and every house be supplied with suitable living water for drinking purposes, from open fresh water lakes and rivers of well known, established purity.

In the management of individual cases, all excretions from the patient should be deposited in vessels containing strong solutions of an efficient germicide and allowed to remain at least two hours before being emptied into a cess pool. The body of the patient kept clean, as well from a prophylactic standpoint as from that of antipyresis; and for the same reasons the bed and body linen changed daily.

* * * * * *

We believe that the so called typho-malarial fever is only a modified typhoid fever, and that not infrequently typhoid fever passes under observation unrecognized. The same prophylactic measures should be instituted in all doubtful cases as in the typical ones.

Not until the State Legislsture can be made to see their duty plainly in the broad light of reason and experience, so as to give us a good and efficient Board of Health, can we hope to protect the "dear, blind, stupid, people" from the dangers of epidemics of this and kindred diseases.

JAMES CARTER, M. D.

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*Printed in full in this number of THE CLINIC, pp. 1 to 11.

AMENDMENTS TO BY-LAWS OF AMERICAN MEDICAL ASSOCIATION.

AMENDMENT PROPOSED BY DR. N. S. DAVIS, OF ILLINOIS—The General Committee shall be composed of two members from each State and Territorial Medical Society entitled to representation by delegates in the Association, and from the Medical Departments of the U. S. Army, Navy, and Marine Hospital Service. *They shall be chosen by the members registered and present at each annual meeting from each State and Territory, and from the Medical Corps of the U. S. Army, Navy, and Marine Hospital Service, acting separately, on the third day of each annual meeting;* each delegation reporting the names of the members chosen to the Permanent Secretary of the Association on the same day, that they may be announced by him at the opening of the morning session of the fourth day. At the first election each delegation shall choose two members of the General Committee, one of whom shall serve one year, and the other two years, and at each annual election thereafter one member shall be chosen to serve for two years, thus making the term of office of members of the General Committee two years. It shall be the duty of the General Committee thus constituted, to organize by choosing annually a Chairman and Secretary, and such subcommittees as may be found necessary to facilitate the work that may be assigned to it; to meet annually at the place and on the day preceding each annual meeting of the Association, and as often during that week as may be necessary; to nominate, on the third day of each annual meeting, all the general officers of the Association (none of whom shall be members of its own body), the members of the Committee of Arrangements, the Committee on Necrology, seven members of the Judicial Council, and three members of the Board of Trustees for Publication, for election by the Association; to recommend the place and time of holding the next annual meeting; and to consider and report upon all subjects that may be referred to it by vote of the Association. The presence of one-third of the whole number of members elected to the General Committee shall constitute a quorum for the transaction of business. If, at any annual meeting of the Association, it shall be found at the close of the general meeting of the first day that a quorum of the General Committee is not present, it shall be the duty of the President and Permanent Secretary to fill the vacancies in the Committee temporarily by selections from the lists of delegates registered as present from the states to which the vacancies belong.

Should this provision be adopted by the Association, the Permanent Secretary should be authorized to substitute the name "General Committee" for "Nominating Committee" wherever the latter occurs in other parts of the Constitution and By-Laws.

BY DR. J. M. KELLER, OF ARKANSAS—To change the By-Laws whereby the officers of the Sections are elected by the Sections.

BY DR. N. S. DAVIS—Strike out the last clause of paragraph VII, relating to individually affixing names to the Constitution and Regulations of this Association.

BY DR. H. N. MOYER, OF ILLINOIS—There shall be created a Section of Pharmacy and Materia Medica, which shall have its own autonomy, in like manner as the Section in Dental and Oral Surgery. Reputable members of State Pharmaceutical Associations shall be eligible as members of the same on presentation of credentials from their State Secretary, but shall have no voice in the general sessions of the Association.

The Section of Surgery shall hereafter be denominated the Section of Surgery and Gynecology.

There shall be created a Section of Anatomy and Physiology.

The Section of Obstetrics and Diseases of Women shall be abolished.

The Section of Diseases of Children shall hereafter be denominated the Section of Obstetrics and Pædiatrics.

The Section of Dermatology and Syphilography shall hereafter be denominated the Section of Dermatology and Genito-urinary Diseases.

The Section of Medical Jurisprudence shall hereafter be denominated the Section of Mental and Nervous Diseases.

The Section of State Medicine shall hereafter be denominated the Section of State Medicine and Medical Jurisprudence.

The Section of Practice of Medicine, Materia Medica, and Pysiology, shall hereafter be denominated the Section of Internal Medicine.

We have printed above the amendments offered for consideration at the next annual meeting of the American Medical Association, to be held at Newport, R. I., from Tuesday to Friday, June 25 to 28, 1889.

The italics in the amendment offered by Dr. N. S. Davis are our own, that our readers may notice this part of the proposed change in the By-Laws of the Association. If it strikes them as it did us, they will agree that this will not bring the Association one step farther toward a truly representative body then did the old method of choosing the Nominating Committee. Whilst the American Medical Association is supposed to be the representative organization of the physicians of the United States, the members present from the different states and territories cannot, in most instances, be accepted as the representatives of the State Societies whence they came. This is particularly true of States remote from the usual haunts of the American Medical Association. Most of the State Medical Societies have a membership entitling them to more delegates than are ever present at the meeting of the Association. In consequence of this lack of members, able or willing to attend, the societies are gladly willing to issue credentials to all members in good standing, who will attend, and who annually *do* attend, because they love to be present at these meetings, or because they like to roam and have the money to do it with.

We know from a personal conversation had with Dr. N. S. Davis, that it is the wish of his heart to transform the Association into a truly representative body, which shall, *all the year around*, radiate the aims and aspirations of its membership, and to which the members can look for succor when on the reefs in their medical pilgrimage. This committee seems really intended to fulfill these requirements; it should, therefore, without cavil represent the profession in its membership, as measured by the different state and territorial societies. We would, therefore, suggest to Dr. N. S. Davis, and through him to the Association, that his amendment be amended to read:

They shall be chosen at the annual meeting of each State and Territorial Society, and appointed annually by the Surgeon General of the Army, Navy, and the Marine Hospital Service, and their credentials, duly attested, shall be reported to the Permanent Secretary before each annual meeting.

Such a change will lend greater dignity to this "General Committee" and will surely make it more representative, not of the profession alone, but also of the societies existing in it.

Correspondence.

HYDROCEPHALIC FŒTUS.

By Dr. Mary Ryerson Butin, Dorchester, Neb.

Editors Clinic:

Late in the afternoon of December 25, '88, I was called to attend Mrs. ——, multipara. Proceeding to examine the patient, I found the os fully dilated and through the protruding bag of waters I could determine no presenting part. Abdominal palpation failed to give me any clue. After waiting a short time to note the force and frequency of the pains, the membranes were ruptured and a great quantity of amniotic fluid escaped, literally flooding the bed and running in streams on the floor.

The patient expressed a sense of great relief, and when removed to a dry bed an examination revealed a complex presentation. The position of the child was in the right oblique diameter, the head at the right anterior iliac, the feet in the left posterior iliac fossa, and a prolapsed funis centrally.

After repeated efforts at re-position of the cord, and failure, I decided to turn and deliver. Not having competent assistance in administering the anæsthetic, I sent for my husband, Dr. S. L. Butin, who also rendered me valuable service in turning, which was difficult.

Having brought down the feet and secured the arms, the head failing to engage, I introduced my hand to ascertain the cause.

Passing my right hand over the back of the fœtus I came upon a cleft in the spine of about two inches in length, in the lower cervical vertebra, going on to the head I discovered a separation in the parietal bones of more than the width of my hand, and felt the fluctuation of the fluid beneath them.

My diagnosis was then easy—it was clear I had a case of hydrocephalus to deal with.

Though the woman was thoroughly under the influence of chloroform, the efforts at expulsion were terrific, and as in such cases rendered rupture of the uterus imminent.

Not having an aspirator with me, I seized a pair of dressing forceps in my case, and plunged them through the cleft spine, into the rachidian canal to the cranial cavity. Their withdrawal was followed by a stream of slightly sanguinolent fluid. This procedure had to be repeated several times before enough water had drained away to allow the head to be removed.

The fœtus was a well formed female child, weighing about 7 lbs., and was perfect in development, except the head. This was out of proportion to the body. The measurement in its largest circumference was 21 inches, the frontal bone flattened and measuring 7 inches gave a peculiar square appearance to the face. The tissues of the neck were infiltrated with water to the extent that no neck was apparent. The integument covering the chest and back presented a smooth and even surface to the face and head. The lower maxillary bone was present, but no chin could be seen. This gave a peculiar appearance to the child.

The case presented these interesting points: Hydramniosis, a complex presentation, a hydrocephalic fœtus causing dystocia, with spina bifida.

The mother made a good and rapid recovery.

APPLICATION FOR MEMBERSHIP IN THE NEBRASKA STATE MEDICAL SOCIETY.

To the Editor of the Omaha Clinic:

DEAR DOCTOR:—By your courtesy I was permitted space in the CLINIC, in which I took occasion to state under what conditions physicians of the State could gain admission to the Society at its next meeting at Kearney, May 21st. Unfortunately for the peace of mind of some members of the profession and some members of the Society, I used the following language: "The application must be accompanied by letters from, and addresses of prominent physicians AND CLERGYMEN of every place in which the applicant has lived and practiced medicine since his graduation."

Just as publicly as this statement was made I wish to retract it. I did not know that I had company in my misery. I thought myself the only one, who could not get "a character" from clergymen. But seriously, the intention of the committee is to get the addresses of prominent persons, who know and have known the applicants, so that it, the committee, may *convince itself* that it may conscientiously advise the society to accept the applicant. If the condition requiring the endorsement of two permanent members satisfied the Society, the Committee on Credentials would become superfluous and its report farcical. Such is evidently not the intention of the by-laws, which read: "All applications for membership shall be referred to the Committee on Credentials, *who shall report thereon.*" Now this committee can make but three reports: *i. e.*, 1st, that the applicant is worthy of membership; 2d, that he is *not* worthy, and 3rd, that the committee does not know; throwing the responsility upon the Society itself. The first two reports can only be made upon due inquiry—the third, either because conscientious weighing of the evidence leaves the committee undecided, the jury disagrees; or the other alternative exists, the committee did not do its duty at all, did not make due inquiry, and to cover its negligence makes no report. Excepting this latter contingency, which I hope will nevermore digrace the Society, it must be apparent to every one that the committee must have TIME and OPPORTUNITY to do its duty both by the applicant and the Society. The latter has graciously conceded the one, *time*, by saying: "*No one shall be admitted at the annual meeting hereafter.*" And the committee most respectfully ask for the other, *opportunity* to be vouchsafed by the applicant for membership. No one can be more assiduous in his labor to increase the membership of the Society than I have been; yet the time has passed, if it ever existed, that the Nebraska State Medical Society needs to beg for members. Those who wish to join, will find the officers courteous and the members obliging—all stand ready to open the doors wide to *worthy applicants, who will conform to* LAWS *and* ETHICS.

But here comes one who says: "Your constitution and by-laws say nothing about references, except *your* amendment and an unconstitutional motion made at your last meeting. I object, therefore, to your demands for references, and I will make application to the Society at Kearney." To this one I say, and the Committee on Credentials, whose chairman I have the honor to be, join me in the answer: "Your action is exceedingly undignified, approaching arrogance in the assumption that you may dictate the conditions under which you will enter the doors to our Society."

Fortunately, the Society's doorkeeper (the Committee on Credentials) possesses the password, which each applicant must acquire before he can become a member. This password will be cheerfully given when:

1. The application, furnished by the committee by order of the Society, through the Secretary, has been duly executed.

2. It is endorsed by two permanent members of the Society.

3. It is returned to the Secretary with an enclosure of five dollars (the membership fees and dues for the first year.)

4. Sufficient references are given to the Committee on Credentials to satisfy themselves that the applicant is worthy of their endorsement.

Members, therefore, who advise possible applicants for membership to disregard the committee's requirements, may find themselves in the position of offering apologies to their misguided friends, if the Committee on Credentials should vote against their friend's admission, upon the ground that not sufficient *time* and *opportunity* had been given to ascertain the applicants fitness for membership. I am dear doctor,

Yours respectfully.
A. S. v Mansfelde, M. D., Sec'y.,
And Chairman of the Committee on Credentials, N. S. M. S.
Quality Hill, Ashland, Neb., April 8, 1889.

CIRCULAR FROM THE SECRETARY OF THE NEBRASKA STATE MEDICAL SOCIETY.

Membership in the Nebraska State Medical Society can be attained by writing for a blank application, which must be filled out and signed by TWO permanent members of the society and returned to the secretary, Dr. A. S. v. Mansfelde, at Ashland, with an inclosure of $5.00—$3.00 for membership fee and $2.00 for annual dues. This money is returned if the applicant is not admitted.

This application must be accompanied by references to prominent parties residing in the present location of applicant, and also to like parties in every place which has been the residence of applicant since his graduation, and preferably to members of the regular profession, who are members of the state societies, where the applicant may have lived.

No application will be acted upon at the annual meeting.

All applications must be received prior to the 20th day of April, 1889.

The Nebraska State Medical Societv will meet in annual session in the city of Kearney on the 21st day of May, 1889.

All inquiries should be addressed to the secretary, who will gladly give information on any subject connected with the business of the society.

To the MEMBERS and applicants for membership in the Nebraska State Medical Society: All records of cases, reports of chairmen of sections, and all voluntary papers should be reported to the secretary BY TITLE on or before 1st day of May, 1889. The programme will be printed in The Omaha Clinic, commencing now, and until the last issue prior to the annual meeting.

The following papers have been promised up to date:

The Jugulation of Acute Diseases; by L. A. Merriam, M. D., Omaha.

A Case of Concussion from an Explosion of Giant Powder; by A. B. Somers, M. D., Omaha.

A Case of Atresia Hymenales with Menstrual Retention; by E. A. Benton, M. D., Central City.

The Best Treatment of Epithelioma; by W. O. Henry, M. D., Pawnee City.

Some Cases of Puerperal Eclampsia; by A. B. Anderson, M. D., Pawnee City.

A. S. v. Mansfelde, M. D.,
Ashland, Neb.
Quality Hill, April 6, 1889.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY.

Council Bluffs, Ia., March 21, 1889.

The Medical Society of the Missouri Valley convened its third session at the Ogden House, Council Bluffs, at 8:00 P. M., Thursday, March 21, 1889, with Donald Macrae, President, in the chair.

The following members were registered during the session, to-wit: Drs. Macrae, Carter, Green, Milroy, R. M. Stone, Summers, Hanna, R. C. Moore, Merriam, Barstow, Knott, Robertson, Bridges, Houghton, Nesbitt, Hart, Thomas, Campbell, Hiett, Hildreth, Lacey, Jonas, Ross, Harrigan, Dailey, Strong, Seybert, Clark, White, Gifford, Bryant, Towne, Somers, Crummer, Hursh, Cook, Cleaver, Harvey, Chapman, G. P. Wilkinson, Jennings, Bowers, McClees, Denise, Porterfield, Young, Wyland and Martin.

The following were elected to membership in the Society:

G. C. Beals, M. D., Lewis, Ia , graduate of Bellevue, 1885.

I. M. Harsh, M. D., Griswold, Ia., graduate of Phys. and Surg. Chicago.

D. W. Jackson, M. D., Villisca, Ia., graduate of Keokuk, 1878.

Thomas Kelley, M. D., South Omaha, Neb., graduate of McGill, 1873.

E. A. Kelley, M. D., Norfolk, Neb., graduate of Ohio Med., 1878.

A. D. Nesbitt, M. D., Tekamah, Neb., Jefferson, 1887.

J. A. J. Martin, M. D., Red Oak, Ia., Phys. and Surg., Chicago, 1885.

J. M. Wyland, M. D., Minden, Ia., State University Iowa, 1886.

E. B. Young, M. D., Red Oak, Ia.

The minutes of the last meeting were read and approved.

On motion of Dr. R. M. Stone bills for hall rent and stenographer were allowed and ordered to be paid.

On motion of Dr. James Carter the President and Secretary were instructed to issue credentials in the order of their application to those members of the Society wishing to attend the American Medical Association.

On motion of Dr. F. S. Thomas the President was instructed to appoint a visiting delegate to each of the State Medical Societies of Iowa and Nebraska.

On motion of J. M. Barstow the thanks of the Society were tendered to the proprietors of the Ogden house for the use of their parlors.

On motion of Dr. J. C. Denise the following standing rule was adopted: "The Secretary shall send to each member of the Society one month's prior notice of each meeting."

The following papers were read and cases exhibited, followed by discussions thereon:

1. A Study of an Epidemic of Typhoid Fever in Omaha, 1887, with Especial Reference to the Relation Between Water Supply and Etiology; by W. F. Milroy, M. D., Omaha.
2. Intussusception—With History of a Case; by W. O. Bridges, M. D., Omaha.
3. Wry Neck Treated by Open Incision—With Exhibition of a Case; by J. E. Summers, Jr., M. D., Omaha.
4. Exhibition of a Case—Old Dislocation of the Shoulder—Operation—Restoration; by A. F. Jonas, M. D., Omaha.
5. Eucysted Empyema, following Pleuro-Pneumonia; by B. F. Crummer, M. D., Omaha.
6. Prophylaxis of Tuberculosis; by H. G. Gifford, M D., Omaha.
7. Phantom Pregnancy; by R. M. Stone, M. D., Omaha.

On motion of Dr. James Carter, Omaha was selected as the next place of meeting of the Society.

Adjournment.

JAMES CARTER, M. D., Secretary.

Surgical Progress.

PRESSURE FORCEPS IN VAGINAL HYSTERECTOMY.—In two cases I have employed the hemostatic forceps, not only in hemostasis, but also in the closure of the wound, and they seem to fulfill the indications satisfactorily, although further trial will be necessary to determine their usefulness for this purpose. Closure of the wound with hemostatic forceps is effected as follows: After the uterus has been removed and all the bleeding points controlled, the forceps which clamps the broad ligament on either side is drawn down until the stump is exposed. The anterior and posterior peritoneal edges of the wound are approximated with a tenaculum in each hand, and fastened together at two or three points by means of light hemostatic forceps; additional forceps being applied also in each angle of the wound in such a way as to close the wound tightly around the stump, so that, if possible, that part of the ligament which is included in the grasp of the forceps shall be held down in the vaginal wound outside of the peritoneal cavity. The forceps suffice to hold the peritoneal edges of the wound in accurate coaptation until union has taken place, which occurs in a few hours unless there be fluid in the cul-de-sac, in which case the small space between the forceps will serve the purpose of drainage so long as drainage is necessary, and then also unite.

Thus, while union is taking place, the margins of the peritoneal wound are sufficiently immobilized to prevent the constant deviations of the rectum and bladder from disturbing the wound, and thereby contaminating it with septic infection during the healing process. A great disadvantage of the open treatment is thereby avoided. On the other hand, it is hoped that the great advantage of the open treatment, that is drainage, will be secured by this method of closing the wound, because the forceps themselves in a surprising degree facilitate drainage. Any fluid finding its way to the little spaces between the forceps is promptly discharged along their course into the vagina.

The handles of all forceps should be tied together with strong thread to prevent them from snapping apart. The less important ones which have been applied for the purpose of securing small bleeding points, may be removed in twenty-four hours. The more important broad ligament forceps should be left forty-eight or seventy-two hours.

This method of hemostasis will probably not be confined to simple hysterectomy. The following is quoted from a paper which I presented to the Chicago Gynecological Society, December 16, 1887:

This operation may have a wider field than ordinary vaginal hysterectomy; I have determined in the next case I have of uterine myoma, in which supra-vaginal hysterectomy would ordinarily be performed, to open the abdomen, lift the tumor out through the abdominal wound, and then instead of using the serre-nœud, attempt to secure the broad ligaments by means of lock forceps in the vagina. It would probably be easy, by having the index and middle fingers in the pelvic cavity, one on each side of the broad ligament as a guide, to force the blades of the forceps through, close to the uterus on either side of the ligament, to the finger tips, and then having secured both ligaments, sever the anterior and posterior uterine attachments. The peritoneal edges of the vaginal wound might then be closed with a continuous catgut suture, or seized with lock forceps in the vagina, as already described. This method of performing hysterectomy for myoma, when the tumor is too large to be delivered through the vagina, is worth trying; it would enable the operator to dispense with all extra-peritoneal methods of hemostasis for ovariotomy.—*E. C. Dudley, M. D., Gynecological Transactions, 1888.*

COLECTOMY VERSUS COLOTOMY.—Surgeons have hitherto looked upon cancer of the intestine as a disease which did not admit of even the attempts at cure which they are in the habit of making when the seat of the disease is in a more accessible situation. Such cases have been looked upon as admitting of palliative treatment only, and accordingly colotomy was practised with the view of enabling the unhappy patients to pass their declining months in comparative comfort. Some seven or eight years since it occurred to some enterprising surgeons that it might be possible under certain circumstances to make a clean sweep of the diseased tissues, and thus afford the patient at least one chance of recovery. The operation, as might be imagined, is both difficult and dangerous, and but few surgeons have been willing to rush in and operate, on the forlorn hope of rescuing their patient from the fate which was otherwise infallibly in store for him. Still, the operation has been performed some few times, and last week, at the Royal Medical and Chirurgical Society of London, Dr. Kendal Franks brought forward two which he had himself performed. Of these, one was successful and the other died. At the same time he produced a very careful summary of the results of all the cases the record of which he had been enabled to unearth, numbering in all some fifty-one cases. One is fain to admit that at first, the sight of these tables infers the possession of no small amount of courage on the part of the author of the paper, for the results were hardly such as to create a favorable impression of the value of the operation of colectomy. There was only one case in which the operation appears to have attained its object in affecting a cure, a cure, that is, so far as can be inferred from an immunity extending over four years. Forty per cent. of the cases succumbed from the effects of the operation, and the want of success in the remainder was evidenced by the speedy recurrence of the disease. It is not surprising that even the advocates of the operation, under these circumstances, hesitated to predict the future of an operation with such grisly results. The propriety of the operation at all was sharply questioned by such authorities as Mr. Bryant and Mr. Treves, and they asked no further evidence in support of their arguments than the tables so generously placed at their disposal by Dr. Franks. It was pointed out that cancer of the intestines is usually of slow growth, and as a rule gave rise to no symptoms until the volume of the tumor is such as to cause intestinal or other obstruction. That being so, it would obviously be idle to attempt to deal with a growth involving extensive areas of tissue, and special stress was laid upon the immediate results as compared with colotomy. The latter, it is true does not pretend to be more than a palliative operation but it relieves the immediate symptoms and prolongs the patient's life, often for several years. The most favorable interpretation that can be placed upon the facts laid before us is, that if the disease can be diagnosed at an early stage while still limited in extent, it might be feasible to remove the diseased portion of gut, and so eradicate the malady. The drawback is, as we have already pointed out, that in the vast majority of cases it is quite impossible to make the diagnosis in time to allow of this particular operation being practiced. Under any circumstances, therefore, the utility of the operation must be very limited, no matter what improvements may be affected in the proceedure, unless the means of arriving at an early diagnosis are also increased *pari passu*. The discussion in any case was interesting and instructive, and every credit is due to the surgeon who had the courage to perform the operation in the face of such depressing statistics. If he has not succeeded in rehabiliating the proceedure he has at any rate cleared the ground, .and enabled surgeons to form a fair and just estimate of the capabilities and value of an alternative course. It is quite possible that some patients may, as Dr. Franks himself declared he would do, prefer a severe operation which held out some hope, however small, of cure, rather than submit to one which could never do more than mitigate discomfort, leaving them face to face with the prospect of inevitable death at no very distant period.—*Med. Press and Circular.*—(*Cin. Lancet-Clinic.*)

THE ANTISEPTIC VALUE OF CREOLIN.—Experiments with the new antiseptic creolin indicate that it is possessed of very active properties as a germicide, and it has lately been recommended as a valuable remedy for the treatment of cholera. It is said that Drs. Sirena and Alessi have been studying this product for some time, and their conclusions seem to be warranted by the results obtained. They are credited with the statement that ten drops of a three per cent. aqueous solution added to a pure culture in broth of Koch's comma-bacillus is sufficient to sterilize it completely in the space of five minutes. From one to four drops of the same solution, when added to ninety drops of a broth culture will prevent the development, and from one to three drops of a one per cent. solution will materially retard the development of micro-organisms, while four drops of the same are sufficient to prevent it entirely. The value of this product will be apparent if we accept the view advanced by Dr. N. P. Hatfield, that a single bacterium will multiply so rapidly that at the expiration of three days, there will be in its place no less than 4,772,000,000,000. Of course there is to be taken into consideration the fact that the latter calculation is largely theoretical, but if creolin will act with as favorable results in the body as it seems to do in the test tube, we shall have cause for congratulation in having such a substantial addition to our materia medica.—*Med. Register.*—(*The Epitome.*)

SURGICAL MISHAPS.—In pulling teeth the jaw has not infrequently been fractured, and Nussbaum relates a case of his own where endeavoring to extract two teeth which were locked together he dislocated the jaw and finally had to chisel out the teeth. The jaw was replaced, and when the patient was recovering from the ether he retched violently, and the jaw was again dislocated. It was again replaced and fixed by a bandage. He also relates a case of large tonsil which he attempted to excise with a tonsillotome. The tonsil was so hard that the cutting part of the instrument broke off. On examining the part he found there was a concretion in the tonsil. He could not find the broken piece of the instrument anywhere—the patient had swallowed it. However, under the persuasive influence of a dose of salts it was passed per rectum a couple of days after. When speaking of the dangers and difficulties of tracheotomy the author relates a story of one of his own pupils in large practice who asked him to help him perform his first tracheotomy. The child was three years old and thin. The operator boldly cut down and exposed the trachea, as he thought, then incised it and endeavored to introduce the canula, but failing to do so he cried out that the whole trachea was so filled with membrane that the canula could not be introduced. Nussbaum examined the wound and found the young operator had laid bare the spinal column and incised the inter-vertebral substance, and thought he had cut into the trachea, which had been pushed aside. Sudden death during or even before the operation of tracheotomy is familiar to surgeons who frequently perform this operation, and the immediate cause is the anæsthetic, which acts badly in cases where the respiration is obstructed. In adults, cocaine may be substituted with advantage.—*Montreal Med. Jour.*—(*Ibid.*)

Treatment of Ingrowing Toe-Nail.—Dr. Theodore Clemens, of Frankfort, strongly recommends the employment of tinfoil in the treatment of ingrowing toe-nail. He first has the toe thoroughly washed with soap and carefully dried. He then envelops the whole nail with tinfoil, putting a strip between the portion that grows in and the raw surface caused by it. The tinfoil is fixed by means of a very thin layer of common wax, and the patient told not to wash the part, but to use dry bran for rubbing off the dirt. Of course the toe has to be repeatedly dressed with tinfoil; but, if the operation is carefully performed it is surprising how long the tinfoil will remain intact, even when the patient is, as was usually the case in Dr. Clemens' hospital practice, very poor and very badly shod. The results are stated to have been most satisfactory, and are ascribed by Dr. Clemens not merely to the mechanical action of the tinfoil, but to the effect of the permanent contact of a combination of metals comprising iron, copper, arsenic, molybdenum, wolfram and bismuth, with a moist and growing portion of flesh. This, he says, brings abont in a few weeks the complete healing of the sore, and causes the nail to grow more slowly and in a more healthy manner.—*Lancet.*—(*Ibid.*)

Cyst of Left Vocal Cord.—By Chas. W. Hayward, M.D. (Liverpool.) Patient was a female aged forty-three, healthy in appearance, markedly hoarse, had been so for six months, and it was getting worse. Larynx normal, except left cord. On the middle three-fifth of the cord for its entire breadth was a cyst, rounded in contour and sloping off at the ends, about one-eighth of an inch in thickness. Translucent and slightly striated in appearance. A ten per cent. solution of cocaine was painted on and the cyst idcised with Schrotter's guarded inter-laryngeal knife. Clear mucous exuded. The cyst wall was pulled out by Schrotter's pincette and the inside touched with solid nitrate of silver, very little pain was experienced. The larynx was pencilled with weak solution of nitrate of silver for a few days. In about a fortnight the patient returned home, hoarseness almost disappeared and the cord looking very nearly normal.—*Lancet*, September 15, 1888 (*ibid.*)

Miscellany.

MISCONCEPTION.

The following verses must have been written in ignorance of the limitations which medical women set themselves in the practice of their profession:

Oh, she comes in silk and satin;
She is versed in roots of Latin,
As well as every root that grows below the mother-earth;
She reads Sanskrit, she reads Coptic;
She's the apple of my optic;
Of degrees she has a lengthy list, and Girton saw her birth!

Yet it sets my blood ashiver
When she asks about my liver;
And I stutter and am speechless when my tongue she wants to see,
For I'm fearful to expose it
In *neglige*—she knows it,
When her lovely eyes with tender light are riveted on me.

With my pulses at a hundred,
'Tis not strange that she has blundered,
And doctored me for fevers when I didn't have a sign;
'Tis her presence that is heating,
And which sets my heart a-beating,
For I'm only a poor mortal man, and she is so divine.

Still it's pleasant to be ailing,
Just to have an angel sailing
Into your humble room and fill it full of life and light;
But, as for a diagnosis,
Why, what anybody knows is
Impossible at such a time to formulate aright.

—*British Med. Jour.—Cin. Lan.-Clin.*

Ten Good Things to Know.—1. That salt will curdle new milk; hence in preparing milk porridge, gravies, etc., the salt should not be added until the dish is prepared.

2. That clear boiling water will remove tea stains and many fruit stains. Pour the water through the stain and thus prevent it spreading over the fabric.

3. That ripe tomatoes will remove ink and other stains from white cloth; also from the hands.

4. That a tablespoonful of turpentine boiled with white clothes will aid in the whitening process.

5. That boiled starch is much improved by the addition of a little sperm salt or gum arabic dissolved.

6. That beeswax and salt will make rusty flat-irons as clean and smooth as glass. Tie a lump of wax in a rag and keep it for that purpose. When the irons are hot, rub them first with the wax rag, then scour with a paper or cloth filled with salt.

7. That blue ointment and kerosene mixed in equal proportions and applied to the bedsteads is an unfailing bedbug remedy, as a coat of whitewash is for the walls of a loghouse.

8. That kerosene will soften boots or shoes that have been hardened by water, and render them pliable as new.

9. That kerosene will make tin tea-kettles as bright as new. Saturate a woolen rag and rub with it. It will also remove stains from varnished furniture.

10. That cool rain-water and soda will remove machine grease from washable fabrics.—*The Sanitarium.*

THE GOUT.

[Translated by T. C. Miner, M. D., from Le Moyen Age Medical of Dr. Edmund Dupouy.]

This tragedy, in poetic form, was composed towards the close of the sixteenth century by J. D. L. Blambeausart. It has three scenes, and depicts the triumph of the gout.

In one of the scenes the gout addresses a pompous eulogy on its power over humanity, and inveighs against those physicians who discover a new specific against gout every day. This list of remedies for the disease is appalling; we cull but a few to satisfy the reader's curiosity:

"One advises flea wort and a parsley pill,
One eats fruit at morning, when with gout he's ill,
One chews leaves of lettuce, one takes wild purslain;
Another smells pond lillies, when he doth complain.
Some remedies most curious are for gout deemed good,
Such are herbs and simples to purify the blood;
Angelica and gentian, the iris and green thyme,
Along with fresh culled myrtle will cure it all the time;
Hyssop and lavender, cherry and water cress,
Basil, hops and anise, all make the pain grow less.
Centills, sage and savory, when the bowels they unbind,
And the marvelous merchoracan that comes from far off Ind.
There's the beautious laurel leaf that crowneth bard and king.
Privet and cardamoms, whose praise we often sing.
And there's the sleeping poppy, what peace within it resides,
Culled by the Turkish houris in the garden Hesperides;
There's the soothing comfrey and the glorious hoarhound,
And the magic betal nut, in tropic isles that's found;
There's the fragrant *fleur de lis*, when with pain you cry,
There's the odorous sheep dung, given always on the sly,
Some dote on peach blossoms, some on saffron red,
Some like hyoscyamus mixed with piss-a-bed;
There's bread crumbs and fennel mixed with young carrots
Pounded in a mortar along with eschalots.
There are some who use an ointment this disease to heal,
Made of rinds of citron and golden orange peel,
With frankincense and veratria root, to ease gouty pain,
Applied to the great toes on the leaves of green plantain.
There's saltpeter ointment too, when to the foot applied
It makes the patient furious wroth, or else he's terrified,
Giving the gout new twinges, and the sufferer spasms
Only eased by eggs and flour in a soft cataplasm.
Some patients take a razor and their own flesh deeply cut;
The wound then duly poulticed with meal and Cyprus nut.
Some take red cabbage when other methods fail
And eat it with vinegar mixed with slime of snail;
Some use biting dressings made from ugly lizards,
Pounded up with doe's hoof and weasel gizzards.
Many think a certain and most efficacious cure
Is a little blue stone ointment mixed with man's ordure,
And a celebrated surgeon, a knight of great renown,
Used virgin urine as a cure for all the men in town.
Some wear charms like foxes' tails, or a beaver tooth;
Others boil a new born caul and chew it up forsooth,"
etc., etc., *ad nauseam.*

—*Cincinnati Lancet-Clinic*, Feb., 1889.

Mr. Tait has just reported his second thousand consecutive cases of abdominal section. The mortality of the first thousand was nine and two-tenths per cent.; in his second thousand five and three-tenths.

ACTION OF SULPHONAL.—Dr. Ruscheweyh-Jeua reports in the *Neurologischen Centralblatt*, No. 21, 1888, the following results obtained with sulphonal: of 212 administrations given at the psychiatric clinic its action proved fruitless in only twenty-four, or 11 per cent. Until recourse was had to Dr. Kast's latest method of administration (mixing the drug with one pint of milk or hot bouillon and taking it at supper time) the results were still less favorable. The mixture thus being rendered intensely bitter, one can, should the same hinder digestion, add to it a few drops of hydrochloric acid. If the hypnotic was prompt in its action, the consequent lassitude generally observed on the following day was not noticeable and yet in most cases sleep was obtained the following evening without any of the drug having been taken. The author explains this circumstance by the fact that sulphonal circulates in the blood for twenty-four hours and is thus enabled to still exert its physiological action the second evening. Only in the very excited paralytics was daily administration necessary. Excellent results were obtained from its administration in the case of a morphine-eater, a female, as well as of two syphilitics who suffered from insomnia caused by the pain consequent on calomel injections.—*Deutsche med. Wochetschrift*, Jan. 31, 1889.

ELASTIC PRESSURE IN MAMMARY INFLAMMATION.—At the meeting of the Royal Academy of Medicine in Ireland, Section of Obstetrics, on November 23, Dr. Andrew Horne read a paper on this subject. He said that inflammation of the breast was almost always the result of infectious material gaining entrance through fissures and cracks of the nipple. The treatment advocated was to envelop the breast in a layer of absorbent cotton. Having first painted the breast with a 5 per cent. solution of oleate of mercury and morphine, an elastic web bandage is used to make gradual and equable pressure over the inflamed gland, thereby securing the most perfect rest possible.

Dr. Macon said that he had long used compression of the breast in certain cases, though he did not regard it as suitable where there was suppuration; but he could recommend Dr. Horne's method, even where there was suppuration, as strongly as in other cases. It gave great relief to the patient. In certain cases it would permit the woman to go on nursing, which, in case of the poor, was a great advantage. It seems specially applicable in the troublesome form of the affection in which, though the breast was enormously distended, and the skin quite tight, not a drop of milk would flow.

Dr. Smyly said he used to employ Martin's bandages, but he believed Dr. Horne's arrangement to be much better. One of its best features was the covering up of the breast, thus preventing external infection. He believed one of the causes of mammary inflammation was the handling of cracked nipples by the midwife, whose fingers are not always aseptic.

Dr. Horne said it was most difficult to put on elastic plasters so as to get even pressure, and they are apt to cause an eczematous eruption on a tender skin. The Martin's bandage causes an uncomfortable heat, which the elastic web bandage does not.—(*Ibid.*)

MAN'S WORST ENEMY.—"The bacillus of tubercle is," say MM. Filleau and Leon Petit, "of all micro-organisms, one of the most refractory to the action of the most destructive agencies. It maintains its virulence after lying for forty days in putrid sputum, and for one hundred and forty-six days away from contact with air. It can live at temperatures between 86° and 104° F. The most unfavorable conditions, though affecting its activity, do not compromise its existence, for it resumes its virulence whenever its surroundings become suitable. To render it inactive, it is necessary to have recourse to violent means, such as ebullition, steaming, or prolonged contact with antiseptic substances, such as ammonia, concentrated salicylic acid, absolute alcohol, or a strong solution of carbolic acid. Corrosive sublimate itself is powerless to disinfect the sputum (Schill and Fischer). The bacillus acclimatizes itself among the most unfavorable surroundings. It complies with the exigencies of its condition, and even alters its shape, but without losing any of its virulence, of which it gives ample evidence whenever fortune favors it. Its polymorphism is not the least curious point in the life-history of this organism. Thus it is sometimes a short rod, sometimes a line—occasionally it splits, and forms spores—but it always returns to the bacillus in its complete form, with its virulence intact, whenever circumstances become favorable. 'It knows how to suffer, but it never loses sight of its claims.'" —*N. Y. Med. Record.*—(*Cin. Lancet-Clinic.*)

MALE STERILITY AND GYNÆCOLOGY.—Dr. Furbringer, of Berlin, has written some important observations on this in the *Deutsche Med. Wochenscrift*, No. 28, 1888. He believes that sterility in the male is far more frequently the cause of barren marriages than is generally believed to be the case. Aspermatismus is associated with complete impotence, but azoospermia, or absence of spermatozoa in the semen, a condition by no means rare, may exist with perfect potency, and on that account is easily overlooked. With few exceptions azoospermia is caused by obliteration of part of the seminal ducts. This condition is generally caused by double gonorrhœal epidymitis, or inflammation of the vas. After that malady, the chances are, Dr. Furbringer has calculated, nine to one that azoospermia will follow. Prognosis appears to be hopeless when the condition in question is not discovered until three or four months after the onset of the local inflammation. The chief importance of the management of the case lies in accurate diagnosis. True aspermatism is traced by Dr. Furbringer to arrested development of the ejaculutory ducts. He declares that in several cases of sterile marriages under his own observation the unfortunate wife had been sent from physician to physician, or from hospital to hospital, and her cervix divided or her endometrium scraped until a glance at the microscope proved that nothing was wanting to ensure the blessing of children, excepting spermatozoa. Dr. Furbinger's observations are worthy of consideration. No doubt the increase of temperance involves the relatively greater frequency of those forms of gonnorrhœa where the early symptoms are very mild. Hence the first stages may now be as much neglected by patients as they have ever been wont to neglect later stages. The more a case of gonnorrhœa is neglected, the greater will be the chance of serious secondary complications.—*British Med. Jour.*—*Cincinnati Lancet-Clinic.*

IRRIGATION OF THE RECTUM.—Instead of the hard and sharp points usually furnished with syringes for the purpose of giving clysters and washing out the lower bowel, Prof. Quincke, of Kiel, (*Rundschau*, 12, H., 1888,) has used for years with much satisfaction a tube with soft rubber, about twelve inches long with a diameter about one-quarter of an inch; for children one smaller in proportion. Near the more solid end of introduction are two holes on each side; the opposite end is slightly funnel-shaped, similar to an œsophagus tube, only smaller. The introduction of such a tube, well oiled, offers no difficulty whatever, and is incapable of causing any injury to the mucous membrane, and is readily cleaned with soap and water. In tympanites, Quincke has left the tube in the rectum for several hours at a time without any difficulty. If the sphincter should for any reason be paralized or incapable of performing its proper function, a small rubber balloon can be introduced alongside of the tube and inflated which would prevent any fluid from flowing away too soon. Probably moderate strictures could be overcome, and the hard fæcial balls softened in this way without difficulty or danger.—*Virginia Medical Monthly.*

USEFUL IF TRUE.—A fly always walks upward. Put a fly on a window and up he goes toward the top; he can't be made to walk downward. My friend made a window screen, divided in half. The upper half lapped over the lower, with an inch space between. Well, as soon as a fly would light on the screen he would proceed to travel upward, and would thus walk straight out doors. On reaching the top of the lower half he would go outside. Not being able to walk down he had no way to return to the room. By this means a room can be quickly cleared of flies, which always seek the light.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,
208 So. Fifteenth Street, Omaha, Neb.

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A NEW GERM THEORY.

By J. E. SHORE, M. D., O'Neill, Neb.

The spread of epidemic non-infectious diseases, has always been a most interesting phenomenon to the physician, and any theory attempting to throw any light on it may receive some little consideration. This of mine is, I believe, a new one, and may have some microscopic germ of truth in it.

The view that cerebro-spinal meningitis, influenza, and other diseases that are especially epidemic, owe their origin to specific micro-organisms, appears perfectly tenable. But the question has puzzled many, why a disease so perpetuated should not be distinctly infectious; for the germ coming directly from the patient might be expected to be more active than one which has been carried for some distance by air currents, or has lain leisurely by for a few weeks. No one considers meningitis to be infectious, yet it is a matter of experience that not only localities but buildings have retained an element which has led to successive outbreaks of this disease. As to influenza, its tendency to go through families, has led many to believe it to be directly contagious.

In certain lower organisms, a progressive existence is experienced. The familiar changes of larva, chrysalis and moth are somewhat allied to the metamorphosis found in the entozoa. My theory is simply that the germs of some diseases, being really as parasitic as tape-worms, have another existence apart from the human body. We have to imagine the germ of cerebro-spinal meningitis as passing through one stage of life in the air, we will say, before it is ready to take up its habitat in the system of man; and I believe this view will explain the spread of all epidemic diseases, which are not infectious, in the common acceptance of the word. Influenza may be so spread. It is just possible that the more mysterious tetanus may be also. Though the question appears very theoretical, yet it might have some practical bearing on the use of germicides.

*THE PROPHYLAXIS OF TUBERCULOSIS.

By H. GIFFORD, M. D., Oculist and Aurist, Omaha.

It is hardly necessary to state that in the following paper the essential unity of all forms of tuberculosis is assumed; also that the *bacillus tuberculosis* of Koch is accepted as the only cause of the affection. This is mentioned simply because, in spite of the fact Koch, in his first paper, established the etiology with a certainty equalled in the case of no other human disease, and in spite of the overwhelmingly confirmatory character of the evidence which has accumulated in the intervening years, there still remain a few men of note such as Aufrecht and Rivolta, whose clinical acumen is only exceeded by their ignorance of bacteriological methods and of what may be called bacteriological logic, and who persist in doubting the specific character of the bacillus and in occasionally describing the granules of nuclear detritus as micro-organism, vying with it in importance.

Regarding the prevalence of the disease, its somewhat slighter frequency in this western region is apt to make us forgetful that in civilized countries the world over, about one-seventh of all deaths are the results of tuberculosis; and if we consider how many have some form of the disease and either recover from it or die from some inter-current affection it is probably no exaggeration to say that one-fifth of the the entire population of Europe and the United States suffers from tuberculosis in some form.

Searching now for the reasons for this destructive prevalence, we examine the biological characters of the bacillus and and find that while it produces spores and is endowed with considerable powers of resistance, it is not at all remarkable in this respect. In the experiments of Schill and Fischer a 5 per cent. solution of carbolic acid was found to kill the bacilli only after 24 hours, when mixed with equal quantities of phthisical sputum; but the more recent researches of Yersin[*] show that in pure cultures, i. e. with conditioms similar to those under which other pathogenic bacteria have been tested, the bacilli and their spores are killed by 5 per cent carbolic acid in 30 seconds. Schill and Fischer found that dried tuberculous sputum, in comparatively large scales, retained its virulence for six month, while Sormani [†]found that when the spurtum was spread out in a very thin layer on glass, the virulence was lost in four months. Compared with the anthrax bacillus, the spores of which retain their vitality for several years at least, this is of course a very moderate resisting power. In decomposing mixtures the tubercle bacillus, like other pathogenic germs, is destroyed sooner or later, according to the activity of the process. Toward heat, its resistance seems to vary according as it is tested in the sputum or in pure cultures. Voelsch [‡] using phthisical sputum as a test object found that simply boiling up, once repeated, reduced the virulence of the specimens very decidedly but did not destroy it entirely; while Yersin found that in pure cultures the bacillus was destroyed by heating for ten minutes to 70° C. This difference in the resistance of sputum-bacilli and culture-bacilli is in accord with the fact noted both by Voelsch and Baumgarten that in cultures, the bacilli are decidedly less virulent than when grown in the living body. Accepting, however, the highest estimate of its powers of resistance, we find nothing here which gives it any marked advantage over the germs of other diseases. On the other hand, in one respect it is decidedly behind the bacilli of typhoid, of cholera and of anthrax. These germs can grow outside the body, on the most varied media and within a wide range of temperature, wehereas the tubercle bacillus can be coaxed to grow outside the body only with great difficulty, and within a much narrower range of temperature. In this respect it is not quite so tender a plant as was until lately supposed, for Nocard and Roux [*] have shown that it will grow upon agar if 5-7 per cent. of glycerine be added to the medium, and quite recently Pawlowsky[†] by taking great pains to reduce evaporation from the surface, has succeeded in growing it on potatoes. Still we can accept as tolerably certain that under natural conditions no growth of the bacillus ever occurs outside the animal body. What then are the distinctions which give this bacillus such an overwhelming importance? They are, I think, in the main, the following: First, it stands alone among the causes of common diseases, in attacking with equal readiness man and the commonest food and domestic animals. Typhoid fever, cholera, syphilis and other common infections we can convey to the lower animals with the greatest difficulty or not at all; the tubercle bacillus finds conditions favoring its growth not only in man, but, among others, in the rabbit, fowl, sheep, pig and cow. Second, and of even greater importance is the fact that while the germs of many diseases, if they leave the body at all, do so with the foeces and urine and are soon subjected to the destructive influence of decomposition or are washed into water courses, whence they but seldom are able to infect the air; the germ of tuberculosis, on the other hand, is scattered broadcast through our streets and buildings with the sputum of its victims. Third, and equally important is the chronic nature of the affection which it commonly produces. This is what gives it so decided an advantage over the germs of such diseases as scarlet fever and small-pox, where the virus spreads from the body into the air in an even more rapidly diffusible form. Think of a world in which scarlet fever, small-pox and diphtheria ran a generally fatal course of from one to twenty years! Luckily these diseases either cure themselves or kill the patient in a few weeks and he ceases to be a centre of infection. The phthisical patient, on the contrary, may go about for years an unconscious and unsuspected sower of disease.

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*Read before the Medical Society of the Missouri Valley, Mar. 21, 1889.

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[*] Abst. in Centralblatt f. Bacteriologie, III, 577.

[†] Quoted by Cornet, Zeitschrift f. Hygiene V, 288.

[‡] Baumgarten's Jahresbericht f. Microorganismen, etc., III, 174.

[*] Baumgarten's Jahresbericht, III, 172.

[†] Abst. in Cb. f. Bact. IV, 340.

Concerning the food-animals as sources of infection, we have to remember that the parts generally eaten are seldom tuberculous, so that the danger from meat is slight. The tuberculous organs are either rendered at the large slaughter houses, or are allowed to decompose, by either of which processes the bacilli are destroyed. The main danger from the lower animals comes through the use of milk and its products. It is often asserted as a fact, and it is probably true, that no matter how tuberculous a cow may be, the milk will contain no bacilli if the udder be perfectly sound; nevertheless bacilli have been repeatedly found in milk from *apparently* sound udders, and the ease with which the udder of a tuberculous animal may become affected without any external evidence of it warrants the absolute exclusion of all tuberculous cows from the sources of our milk supply. Not only the milk, but as Galtier* has shown, the cheese from such animals is dangerous.

Now, recognizing the phthisical patient as a possible source of danger to his fellow men, what shall we do with him? Demand his isolation? By no means; this were needless cruelty to him, and a superflous burden to society. A fundamental necessity for a proper conception of this phase of the subject is the recognition of the fact that it is physically impossible for bacteria to be carried from a liquid or moist surface into the air, either by evaporation at ordinary temperatures or by moderate currents of air. Time and again it has been shown that the expired air is practically germless, and the fact that numerous series of experiments demonstrate that currents of air stronger than any that occur in the respiratory passages are powerless to remove bacteria from moist surfaces unless the liquid is torn up bodily, indicates clearly that such stray germs as are occasionally found in the expired air have not been given off from the lungs, but are simply such as have failed to be taken up by the membranes of the passages, from the inspired air. As Naegeli *says: "We know that at ordinary temperatures the water from sugar and salt solutions evaporates, but the sugar and salt remain behind. Not the minutest particle of these substances is lost by evaporation. When, therefore, the smallest particles of salt and sugar are not carried off with the watery vapor, how can this happen to the bacteria, the fungus-spores and other micro-organisms, of which the lightest, in spite of their diminutiveness, are many million times larger and heavier than the sugar and salt molecules?" Against these facts the two or three alleged finds of bacilli in the breath of phthisical subjects, made by comparatively inexperienced observers, are practically valueless. Nevertheless, how common it is for physicians to speak as if bacteria had wings and were constantly breaking loose from liquids and flying out into the air.

Recognizing that the breath of phthisical patients is harmless, and that the sputum cannot infect the air so long as it is kept moist, these points should be impressed upon the patient's mind with the utmost thoroughness. He should be told that if he always spits into a spittoon or similar receptacle, or if that is impossible, into a handkerchief which can be folded up in a clean one and kept moist till it can be boiled, he will be practically innocuous; but that if he goes about spitting on sidewalks, floors and handkerchiefs, which he allows to dry before boiling, he is an enemy to mankind, a danger to every human being that crosses his tracks. To take an extreme case, a phthisical man spits but once on the carpet of his home. This mouthful, containing perhaps hundreds of thousands of bacilli, sinks partly into the carpet, partly dries on the surface; a few pairs of feet crush over it, and soon there are many particles fine enough to be floated up into the air for the man's relations to breath. During the night they mostly settle down, some in corners where they will not be disturbed again for months, some to be stirred up again by the morning broom, which, while it cleans out some of the larger particles, tears loose other small ones from the spot originally soiled; and so, before the room is finally rid of them, the whole family has had a chance at the father's bacilli, and when in after years his children die of consumption we puzzle our heads over the possibilities of heredity, and talk about a constitutional predisposition to tuberculosis. The same thing is of course occurring constantly in all sorts of public rooms, theatres, shops and hallways. To be sure, experience proves that the danger is not so great as one would *a priori* suppose; still the fact that one-seventh of all deaths are from tuberculosis, mostly of the lungs and mostly, in all probability, caught by inhalation, shows that the risk is by no means insignificant.

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*Baumgarten's Jahresbreicht, III, 176.

*Cornet loc. cit. p. 280.

Until recently the attempts to detect the tubercle bacillus in the air of phthisis wards have met with but little success. The recent remarkably able paper of Cornet,* in *Koch's Journal of Hygiene*, proves, however, beyond all question that in many, if not all, rooms inhabited by patients with pulmonary tuberculosis, the bacilli are present ***unless the patients have been careful not to spit on the floors nor into handkerchiefs which are allowed to dry before being washed.*** Cornet adopted the plan of collecting the dust from the walls and other little disturbed surfaces in the rooms, thus getting in a condensed form the germ-contents of an immense volume of air. This dust was suspended in sterilized water and injected into the peritoneal cavity of guinea pigs, the rapid occurrence of a tubercular peritonitis in the positive experiments proving the presence of the bacilli in the dust. The results, of which but an indication can be given here, were most striking. Out of fifty-three private rooms of phthisical patients, in twenty-eight the patients spit rarely or not at all on the floor or into handkerchiefs; in none of these rooms were bacilli detected. In the other twenty-three rooms the patients had the habit of spitting on the floors or into handkerchiefs; in all but six of these tubercle bacilli were found. Further, twenty-nine experiments with dust from rooms not inhabited particularly by consumptives, and from the streets, failed to detect the bacillus in any of the specimens. Of course, negative results did not prove the absence of the specific germ, but simply indicated a scarcity. The negative results obtained with street dust were confirmed by an examination into the health of the men employed in cleaning the streets of Berlin, it being found that their proportion of phthisical affection was below the average; in other words, the increased risk of inspiring tubercle bacilli which the street cleaning involved, was so slight as to be more than counterbalanced by physical vigor resulting from the out-door life. This indicates that the danger from street dust is comparable to that of contracting typhoid fever in Council Bluffs and Omaha from the germs which Sioux City pours into the Missouri. The practice of turning sewage into even very large water courses, which must be used for water and ice supply, is highly objectionable, still experience proves that the danger from it is trifling; so also it is reprehensible for a phthisical person to spit in the streets or on the sidewalk, nevertheless the dilution of the tubercle dust is so thorough and the renewal of the air so frequent that the risk of being infected with tuberculosis on the streets is probably insignificant.

The obvious conclusion from the foregoing is that the most important point in the prophylaxis of tuberculosis is the proper care of the sputum; and to attain the utmost security in this respect, not only patients but the laity in general must be impressed with the idea that promiscuous spitting is not only disgusting but dangerous; for while physicians will surely inform patients of their duties in this particular, many persons go about coughing up tubercle bacilli for months before consulting a physician at all. Together with the instruction of the people on this point should go an increase in our spittoon facilities. Not only should they be abundantly supplied in all public buildings, theatres and shops, but even on the streets well-cared for spittoons should be provided. In the choice of spittoons for recognized consumptives, small vessels which can be brought near the mouth are preferable, and they should be provided with lids, for Spillman & Haushalter* have found that the viscera and excrement of flies in phthisis wards frequently contain the tubercle bacilli, and it is easy to conceive how quite a considerable spread of the virus might occur through these insects.

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* Ibid.

*Abst. in Centralblatt f. Cherurgie, 1888 4.

Regarding the disposal of the sputa there is probably very little danger in the practice of simply turning it in with the other sewage, but theoretically it is certainly more desirable to have it first well boiled for an hour, and this, particularly, in hospitals and sanitariums where large quantities are collected daily.

Beside infection with dried sputum the mere mention of some other possible modes, such as kissing, the use of eating and drinking implements, etc., at once suggests the necessary precautions. Cornet shows also that the danger from laryngoscopic mirrors and brushes is by no means imaginary, and urges strongly that each patient provide his own mirror and brush. Dogs should not be allowed to lick the hands and faces of children, both because they are fond of licking up all kinds of expectorated matter and because, according to *Marcus, they are not infrequently tuberculous themselves. Finally with regard to the importance of direct heredity, *i. e.*, intra-uterine infection, evidence is certainly increasing in favor of giving greater weight to this source, but as here the prophylaxis is confined to counseling against the marriage of consumptives, I will not extend the limits of this paper by giving it any further consideration.

†AN EPIDEMIC OF TYPHOID FEVER IN OMAHA.

By W. F. MILROY, M. D., Omaha.

DISCUSSION OF PAPER.

DR. MOORE—I presume the reason the gentlemen are reluctant to open the discussion of this paper is because Dr. Milroy has treated it so thoroughly as to pretty well exhaust the subject. It shows one thing which is very commendable, and that is research. The Doctor has not simply gone through his text books, and found out what this man or that man has said on the subject, but has brought the matter right home to ourselves, by going down to our own water supply, and finding there the cause of the epidemic in Omaha a year or two ago. In my experience while practising in that city, extending over a good many years, I can fully corroborate what Dr. Milroy has said in regard to the source or cause of typhoid fever in Omaha. From my long residence in that city my practice has extended pretty much over the whole area of the town, and during the fall of 1888, in August, September and October, I kept track of about fifty cases of typhoid fever, and with only one exception they were located in that district where they depended for their water supply upon wells; and out of that number there was only one where they depended entirely upon the city water. This was a case on Cass street: a little girl came down with the disease, but it did not spread beyond her, that being the only case in the family. In all the other cases they depended on wells for their water supply. And when I had cases in other parts of the city I could trace them to residence for a short period in the vicinity of the district where they depended on wells for their water supply, of which I have spoken, extending north from Cuming street and east to Saunders, with an arm extending up Burt to Thirty-second street, and one case clear out on Walnut Hill—a girl who lived there had the disease—and on questioning her in regard to where she formerly lived she told me she had been nursing a brother's wife in this infected district, and was taken sick and had to go to another brother's on Walnut Hill. Afterwards I was called to treat a patient for the fever in the house where she contracted the disease. Another girl who lived out northwest of Walnut Hill, on the high prairie, was taken down with the disease, and I was called to see her at about the same time, and on questioning her as to where she had been, I found she had visited a friend down somewhere on Sherman avenue, in this infected district, where they depended on wells. Another case, up towards the High School building, I found the patient had been living with her sister in the north part of the city. So my experience in these cases was, that I could trace them all, with that one exception, to that district where they did not use city water. And this district is one of the oldest settled parts of the city, and long before we had city waterworks they had their wells. They considered the water so clear and spring-like, and supposing it pure, they failed to go to the expense of putting in city water. In other parts of the city, where the houses have been completed since we have had city water, they have put in this water, because it was cheaper than to dig wells, and as far as my experience goes no cases have originated in these districts, but the cases occurring there have been people who had lived in the infected district and had moved out or had beeen visiting friends there. The wells in this district are very shallow; take them in the north part of the city, where the surface is as flat as a barn floor, they strike water ten or twelve feet down, and the deepest of these wells are but fifteen or twenty feet, and of course at that depth they would get all the surface water. But the Doctor has shown us in his paper that it makes but little difference how deep these wells may be, you may go down 100 or 150 feet for your water, there is no telling how near the surface the source is; and it has been fully demonstrated that these germs can be carried long distances, even for miles, and wherever water will go it will carry these germs with it, whether ten or 100 feet below the surface. The people in this district are now pretty thoroughly alarmed, and between loss of time, doctor's bills and medicine bills, they are paying dearly for their experience, and a great many are putting in city water.

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*Abst. in Cb. f. Bact. IV, 412.

†Read before the Medical Society of the Missouri Valley, March 21, 1889; published in full in April number of OMAHA CLINIC.

Some of these people, those who can look at pictures but cannot read can understand what they see, saw an illustration which appeared in the *Omaha Herald*. One picture of a typhoid germ was a monster, dragon headed, with cloven feet and a forked tail. One old gentleman to whom I had talked about this, and who had said that he would not drink water down town where they had the city water but would wait until he got home, where the water was so nice, pure, cold and clear, after this picture came out, asked me whether or not that was a true illustration of a typhoid microbe, and said if it were he would have city water put in, that he didn't want any microbes in his. The last time I saw him he told me they were at work putting in city water.

I can fully corroborate Dr. Melroy's statement as to the cause of the trouble in our city; as to what it may be in other places, of course, we cannot say, but I am quite sure that the cause of all our epidemics of typhoid fever is the water supply.

Another source he mentioned is poor plumbing. I think if any city on the face of the earth is cursed with a rascally set of plumbers, Omaha is that place. They are the most dishonest set of men with whom I have ever come in contact, and I have seen some of their work. I know of one house where the contract called for good, straight work, with iron soil pipe far out beyond the foundation walls, but two years after this was put in there was occasion to dig into the dirt under the house to remove the pipe and make some further connections. Instead of iron soil pipe, it was earthen pipe stuck in without cementing the joints, and when it became necessary to make connection with the kitchen pipe coming down into this, instead of going to the trouble of putting in the proper joints, they punched a hole through this earthen pipe, stuck in the pipe from the kitchen sink, and put on a little putty; this became loosened, and when the kitchen sink was used, the water bubbled up through this opening and flowed into the soil under the house. That was one case where we found them out. How many hundred houses in Omaha are surrounded by the same conditions as the results of such plumbing, I cannot say.

Another case, a house on a hill. One of the nicest families in the city, where I was visiting in a case of confinement, I noticed an abominable odor. They were great cranks on fresh air; always had the windows open during the coldest weather. This spring the man concluded he wanted some new plumbing, and when he came to take out the old plumbing he found the soil pipe, instead of being good, solid iron pipe—that from the bath room was simply galvanized iron pipe, which had had corroded through in places, and was stuck down into the soil pipe without having even a little cement. When they got below the house they found the same state of affairs as I have detailed in the first case, i. e. instead of iron soil pipe, nothing but earthen pipe and that not even put in with cement. These people escaped typhoid fever probably because in that district there were no germs, but if typhoid germs had been introduced into that district, and through the excrement of typhoid patients, passed into the sewer, there is but little doubt but they would have suffered from this disease.

Dr. Carter—The question as to the etiology of typhoid fever is a very interesting and important one, but there are surrounding it many things which are unsolved and mysterious, which, to my mind, seem to take the question outside of the water supply, or even sewerage. We find most cases of typhoid fever isolated—I mean but a single case in a family of several persons, and it is not a very common occurrence to find more than one case out of a family of five to ten persons, although it does occasionally happen. I remember that early in my experience I was called to see a little girl 10 years of age, a member of a family of nine persons, living in a log cabin of two rooms; it was a large log cabin of two rooms with a hall and attic above, and was located in the country on top of a high ridge, the highest ground in that section of the country, the nearest neighbor being half a mile away, with no possibility of contamination of the water supply from out-houses or stables, the stable being located lower down near a ravine, quite a distance from the house, and this was the only case of typhoid fever within the history of the house, which had been occupied at least twenty-five years by some family; and no other member of the large family occupying the house acquired the disease, which was of a very severe type, the child lying comatose and unconscious for a period of ten days. It was a critical case but eventually recovered. So many instances of like history occur, that I cannot but wonder at the nature of the germ, if there is one, and what its habits are, and how it can originate in cases of this kind. Every member of that family were subjected to the same causes and conditions which caused the disease in that girl, and yet they escaped. I do not as yet accept the theory of contagion in this disease in the same sense of which we speak of it in connection with small-pox, measles, scarlet fever, etc. I think its contagiousness is certainly of a mild character, and one which it is difficult to convey from one individual to another. The practice in reference to this disease, i. e., in reference to prophylaxis or protection of other members of the family, is much less taken into consideration than it is in other contagious diseases. In small-pox we isolate the patient in a pest-house, even isolating the nurse, etc., but in typhoid fever there is very little attention paid to matters of this kind, and yet no other member of the family takes the disease.

There may be, there probably is, a specific germ in the disease, but it is of a very peculiar character and type, and differs considerably from the germs causing other contagious diseases. There is no question in my mind that if there is a specific germ or contagion from which the disease must always originate, that it has a great variety of sources or channnels by means of which it can be conveyed from one individual to another; that it is not a very active type, and that there are large numbers of individuals who are subjected to its influences who possess the power to resist its encroachments.

Dr. Thomas—I believe if there is one disease in which I believe in the germ theory more than other it is in typhoid fever. There have been a number of illustrations of this by various authors, and there have been so many instances where typhoid fever has been carried by water that I believe the germ theory is now pretty well established, and it is unnecessary for me to quote authorities on the subject.

I believe it is their power of resistance which prevents other members of the family from having typhoid fever, where there is one case in the family. Undoubtedly it was the cleanliness and care in the treatment of Dr. Carter's patient, and the care taken of the excrement, which prevented the other members of the family from taking the disease. I refer to Dr. Carter's patient who lived on a hill. He stated the stable was low down, but did not give the location of the vault.

Dr. Carter—It was the same—they did not have any.

Dr. Thomas—I presume all the way from the well to the house was used, and therefore it was easy for the well to become contaminated.

I think Dr. Milroy's paper is a vey able one, and am very much pleased at the position he has taken, which I believe to be the correct one.

Dr. J. B. Summers, Jr.—The question of the water supply as the cause of typhoid fever was perhaps as well demonstrated in Vienna as any place of which we have record. Previous to the year 1873, the city of Vienna was supplied by wells and by water which was pumped from the Danube river, running through parts of the city. Typhoid fever was very prevalent, the hospitals always containing a large number of cases. After this time the water was brought from the mountains, about thirty miles, I think, and since they have used the water brought from a distance, typhoid fever has been unknown in Vienna, except when it originates in people moving in from outlying districts where city water was not to be had, or where it is supposed to have been contracted by some one of the methods which we recognize —as contact with the excrement which has become dried, and perhaps particles floating in the air.

I would like to speak of one point to which Dr. Moore referred, and perhaps you all noticed Dr. Moore spoke quite feelingly on the subject of plumbers. He has recently built a row of houses in Omaha, and perhaps this has something to do with his ideas of them. But the point I wished to speak of was in connection with sewer gas—that it was in itself a cause of typhoid fever. Now I believe that investigators in this especial line have concluded that, though sewer gas might make a person feel pretty badly, and is not very pleasant to breathe, still the gas itself does not produce the diseases with which it has been charged, and that in order to contract typhoid fever you must either get it through your drinking water, or through the dried particles of dried excrement. Whether that comes from direct contact with the sick, or by faulty sewage, I do not know, but that is the way in which I believe it is conceded the disease is caused, and not from the sewer gas itself.

I feel very proud of this paper of Dr. Milroy's; it is certainly an illustration of what can be done in the Medical Society of the Missouri Valley, and I am sure it will be a stimulus to the rest of us to try to follow in his footsteps, although we no doubt will fall far short.

Dr. Hildreth—I think as Dr. Summers has said, this paper illustrates what can be done by individual research, and I also think it brings to our mind another thing, that is, that we are too careless and indifferent in these matters; too lazy, and as members of this society do not do our duty to the public, and that we should exert ourselves more in this direction.

In regard to the theory of the specific origin of typhoid fever, it seems to me that there must be spontaneous origin somewhere. We often see isolated cases as has been spoken of here to-night. A few years ago I had an experience in a family where no typhoid fever had ever been known in that precinct, the house standing by itself; one girl sickened and died, and another, a boy about the same age, was taken about the same time, both unmistakable typhoid cases, and severe ones; the girl had been perfectly unconscious, with all the characteristic symptoms of the disease, and finally four out of a family of eight sickened, and I don't know how many more would have been taken had I not investigated the cause and found they were using water from a well that was receiving the sewage from a stock yard standing on sloping ground above the house. I immediately ordered that they should boil the water and cool it—it was in winter. Another well was dug in a different location and no more cases developed. Of course, this was only one instance, and it would not do to formulate statistics from one instance. As far as contagion in this disease, aside from the secretions and passages from the bowels, I have never had any fear of it, but I believe typhoid fever is capable of spontaneous origin by waste animal matter. Of course, the specific nature of the baccilus or contagious element is a question unsettled as yet and is a matter of dispute.

Dr. Lacey—I believe I will be borne out by the physicians of Council Bluffs, in stating that so far, i. e. during the past thirteen or fourteen years, Council Bluffs has not been called upon to take care of what you call an epidemic of typhoid fever. We have had of course, various forms of the disease, some of them very severe and some mild, and we have had them singly or what you might term isolated cases; there have been a few where other members of the family have been contaminated with the disease, but they have been mostly isolated cases. I think that until within the last three or four years typhoid fever germs or spores have been very scarce here in Council Bluffs, i. e. during the time of which I have spoken, the fourteen years of my residence here. About four or five years ago the water supply was put in through parts of the city and used more or less by citizens. About the same time sewerage was started; the streets were torn up and the sewers put in, some of them turning into Indian creek, and others off toward the river to the south and west, and I will be borne out, I think, in making the statement that we have had more typhoid fever in Council Bluffs during the past four or five years than previous to that time. Now I will say frankly, that I think a large proportion of the population of Council Bluffs are still depending on wells in preference to city water, although I think that proportion is now growing rapidly less and the citizens are putting city water in their premises.

Last winter, that is the winter of 1887-88, I was called upon to attend quite an amount of sickness at the Deaf and Dumb Institute, which is located about three miles south of the city, beyond its limits, and depending on their own water supply, which is not connected with the city in any way. During that time (the winter of 1887-88) there were quite a number of cases of what is ordinarily termed "Typho-Malarial Fever," (I understand there is a difference of opinion as to whether that term is ever properly applied), and nearly all of them were mild in character; three or four of them out of perhaps thirty or thirty-five cases ran through a period of from four to six weeks, and only one death out of the entire number. Now, I can hardly agree with Dr. Milroy in regard to the whole source of typhoid fever being the water supply, from the simple fact that in this case I could not attribute it at all to the water supply, the water supply being an artesian well sunk to the depth of nearly 1300 feet, with good iron pipe the whole depth and the water forced by a steam pump through the whole building; this was their water supply for drinking and cooking during that winter. While this sickness was in progress I had occasion to examine the lower portion of the building, and at times detected a very disagreeable effluvia coming from the basement from some source, but it was difficult to locate it, and there were very few in the Institution at that time who had been there for any number of years, but up to three or four years ago the kitchen and dining room had been in the basement of what is called the main building. The main building has two wings, the kitchen and dining room had been in the basement of the main building, and the sewerage from the kitchen was under this main building. It had a good slope and fall so that in running off there was no impediment. At the time of which I have spoken, when we noticed this stench, it was difficult to locate its source, but during the summer of 1888, in making repairs, the floor of the old kitchen was taken up and underneath was found a sewer pipe of good diminsions, being at least eight or ten inches in diamater, and this was giving out even then, when opened, the same stench; of course the sewer pipe was entirely removed and the place filled up. Since that time there has been little or no sickness in the building; the last case that occurred there was the most severe type of all, and occurred, I think, sometime in the early part of September, 1888; one of the mutes, who finally succumbed to the disease. Dr. Green, who sits beside me and who has renedred medical services at the Institution, will bear in mind the matter of which I have spoken in regard to the sewerage under the old kitchen.

Another case I have in mind occurred just across the creek, probably three blocks distant from where we now are, a young girl sickened with this disease and finally succumbed. The family lived immediately on the banks of the creek, still they were not using well water, but city water; there was no well, as I understood, on the premises, but city water was used by three or four families who were renters, and as the same landlord owned all the houses, the tenants all got their water from the same source. The building in which this case occurred had a basement in which the former owner and occupant had raised mushrooms, and the basement was consequently in a damp, moist condition. The family in which this case had occurred had moved in there immediately after the death of one, and the removal of the balance of the family of the original owner. This young lady was about seventeen years of age who died, and after her death the family, at my suggestion moved from the place, and another child, a girl about eleven years old came down with the disease in a mild form; still it ran through the usual course and occupied about eight weeks, though she finally recovered. Now I am not able to say that in either of these cases, the one occurring on the bank of the creek, and those at the institution outside of the city, that the water supply was in any way the cause of the disease. I hardly think it possible that it could have been in these cases, still we know the disease occurred.

Dr. Towne—It seems to me that two points are to be looked at in discussing this matter, provided we admit the germ theory of this disease, and that it is upon a firm basis. They are these: First, the soil must be in some way prepared for the seed. Second, the seed must come in contact with the soil before there is any growth of the disease. Let me illustrate by a little epidemic of diphtheria which occurred, and which was reported in the Report of the U. S. Board of Health for 1879: On the first Monday in May twenty children assemble with their teacher in a little school room; back of the school runs a little stream, and on higher ground than the stream is a farm yard, the outlet of the barns and the farm yard running down to the little brook; a little farther up the stream is a bunch of green grass, the green grass extending down to the brook, and under the grass is buried a colt. Monday these children become thirsty and all but three or four of them and the teacher drink from this stream; there comes also a little girl four or five years of age, who has had a mild attack of diphtheria, and has been as well as ever for as much as two weeks, but she wears an apron which she has worn through her sickness, without its having been washed, and her eyes are a little red. Now before Friday night there are twelve very severe cases of diphtheria, and ten of these children die. I don't remember how many secondary cases there were. Now how shall we account for this? A bottle of water taken from the stream just back of the school, placed beside a bottle taken a dozen rods above, from the same stream, and allowing them to stand for three days, the first is murky, and you cannot see through it in three days, and at the end of three weeks the second bottle is perfectly clear, standing side by side. None of the children, I believe, were ill except those who drank of this water, certainly the teacher was not. Now was not the soil put into proper shape to receive the few germs of this mild type of diphtheria? In the cases of diphtheria coming under my observation I have seen very similar conditions. Now in cases of typhoid fever do we not observe the same thing? Be it some defect in the sewerage, or the water supply, or something or other in the house or outside of the house, or in the conditions of a man which depress his vitality and so saturate his system with poison as to make him excellent soil on which this germ can grow. And a man in good health who is not subjected to these surroundings, is not proper soil. It is very difficult to grow evergreens here in Nebraska on a certain kind of soil, but the soil may be prepared in some way so that evergreens will grow as they do in New England, and so with the chestnut, and hence I think that two things are always necessary for a severe type of this disease, or perhaps I might say, any type, and these are, first, the germ, and second, the soil prepared for it.

Dr. Lacy—If I may be permitted, there is one point I would like to speak of, and that is in regard to the statement made by Dr. Summers that he thought the sewer gas of itself would not convey the typhoid poison or germ, or whatever you call it, but that he thought possibly the dried particles from sewers floating in the atmosphere might cause the diseases. Now I would like to know if it would be possible to separate the dried contagion or contagious particles as coming from the sewer from the sewer gas itself? If we did we would have to have two different currents of it, one doing its work and the other harmless. I think it would be impossible. You say you do not think the effluvia is contagious, but the dried particles are, and it seems to me impossible to separate the two. If there are any of these dried particles the gases must contain them, because that is the medium through which they are floated into the atmosphere.

Dr. A. B. Somers—I think no one will dispute Dr. Milroy's statement, or the conclusions he has arrived at in regard to the epidemic in Omaha. A large proportion of the cases were in families who drank well water, and he has shown by analysis that the water was impure in every instance. I think the investigations of the health boards in the Eastern States, especially Pennsylvania and Michigan, will sustain Dr. Milroy in this statement, and in these statements they have probably the most efficient boards of health in the country. They have been investigating the causes of typhoid fever in these old cities and towns for a long time, and their conclusions show a large percentage (I think 90) of typhoid fever cases are traceable to drinking water, and it seems strange that anyone should dispute this fact if they have read the health reports of those states.

Another point—in regard to sewer gas. Now sewer gas of itself is not supposed to cause typhoid fever, but it has been shown conclusively that sewer gas can and does convey the germs of any of these diseases. Germs of any disease can be conveyed in atmospheric air, and it has been demonstrated that sewer gas can carry these germs as well. At the present time it is conceded in New York City that the whole sewer system is a hot bed of the germs of disease, and wherever the sewer gas escapes into the houses it brings these germs with it. It is not the gas itself, but the poison germs brought in with it that produce disease.

One other point I wish to speak of, and that is the contagiousness or communicability of typhoid fever. We all know that typhoid fever is not as contagious as small-pox, measles or scarlet fever, but at the same time when we have a patient sick with typhoid fever, there are germs contained in the excreta of the patient which will produce the disease in others, and which are conveyed by means of the drinking water, the food or the air, into the alimentary canal and cause the fever. I think the typhoid germ taken into the lungs through the air, will not cause the fever, but when taken into the alimentary canal it will cause it.

In cases of suspicious well water, I should order the water boiled before drinking it. You will find that some persons drink very little water, and others are drinking water constantly, and those who drink the smallest quantity of water rarely have the fever. I think with proper precautions a large proportion of the cases of typhoid fever can be prevented.

Dr. Bridges—I think one of the most satisfactory things a physician finds in treating a case of infectious disease is that there is a well in the back yard, and when he has found this he does not go any farther. I believe typhoid fever is a disease caused by a specific poison, and no well water will produce the disease unless the specific poison is first introduced into the well water, and because there is a well in the yard, we should not stop our investigations and decide that that is the cause of the case we are treating. In Omaha, in the district referred to, I believe there is probably a greater number of wells in proportion to the population than in any other part of the city, except, perhaps, that portion between Cuming and Cass streets, which is really older than the other, and in which there has not been a great deal of building in the last few years, and there has been less typhoid fever in this district in proportion to the population than north of Cuming street. During 1887 and the latter part of 1886, more grading of the streets was done north of Cuming street, than was done south, and between Cuming and Cass. I speak of this to show that we should not be content to examine but one source for this poison. If one case of typhoid fever is introduced into a locality and the dejecta from the patient are not properly taken care of, that center may develop a great deal of disease in that locality, but if the dejecta are properly taken care of, no more fever will develop. Flint gives an illustration of this: A well had been used by the families in the neighborhood for a good many years, and there had been no cases of typhoid fever at all, and a patient was brought from a distance who had typhoid fever; the dejecta were deposited in the yard and the well became contaminated, and a great many cases occurred. I think one of the most important things to do in all cases is to investigate the previous existing cause of the disease. I do not think typhoid fever is contagious; I have never seen a case developed from another case unless the dejecta and soiled clothing were not properly disinfected. I was called to see a servant girl, and on investigation I found she had been a servant in a family where there was typhoid fever, and no other members of the family developed the disease except this servant girl, and on inquiry I found that the clothing from the patient and from the bed had been taken to the girl's room and put in a closet and allowed to remain there until washday. This illustrates, to my mind, the theory that the specific poison of typhoid fever arises from a germ in the dejecta, which must undergo certain changes in the decomposition of organic matter, giving rise to the poison which produces typhoid fever.

Dr. Ross—I would like to ask a question under the head of prophylaxis in this disease, and that is whether a student from a family where there is typhoid fever should be allowed to attend school? The question was asked me when attending a case of typhoid fever. A young girl from the family was attending school, and when it became known that she was from a family where there was typhoid fever, the teacher sent me a note asking if typhoid fever was not contagious, and if the girl had not better remain at home. I answered that it was not contagious, but infectious, and would like to ask if that was was the proper view to take of the case.

Dr. Moore—In speaking of the water being the source of this trouble, some of the gentlemen appear to be laboring under the impression that the water supply was the starting point of this disease; that the water itself was the cause of the trouble, but no one at the present day can maintain such a position. The cause of the disease was that these typhoid germs by some means or other had gotten into the water supply in that part of the city, and not that the water itself was the cause. The water was simply the medium through which the typhoid germs became scattered. So also in reference to sewer gas; sewer gas itself cannot produce typhoid fever any more than it can measles or small-pox, but it may be the medium through which typhoid germs are scattered. I do not believe that small-pox germs could be carried by sewer gas, but typhoid germs are of that peculiar character that they can be carried through this medium.

Dr. W. F. Milroy—I have but little farther to say in regard to the cause of typhoid fever. I believe there remains no doubt that it is a disease which is propagated by a germ. All that is lacking of absolute demonstration is the inoculation of the lower animals, and procuring by this means lesions that are peculiar to typhoid fever. Some observers have even claimed that they have accomplished this, but I believe that is generally doubted. There is a germ which is capable of being recognized, which is found in the blood, in the spleen and other viscera, and in the excretions from typhoid fever patients, and by some very good authorities this germ is recognized as equal in value as a positive diagnostic to the *bacillus tuberculosis* of Koch in tuberculosis, and where there is doubt of the diagnosis, they recommend the examination of the excretions with that end in view.

Dr. Moore has stated the idea I intended to set forth in this matter when he said that it is not the well water which is the originator of the disease, but that it is simply the mode ot transmission. I believe, too, that most of the authorities, probably all of them, which I have ever examined, admit that sometimes these germs may be transmitted by the air or by sewer gas. Rather than consume the time necessary to establish the point in reference to wells by citing instances, I chose to quote authorities, which I did *ad nauseam* almost. But the instances which are almost absolutely positive where well water has been the mode of transmission are countless. We could spend days, I believe, in simply relating those cases, they are so innumerable, and are constantly accumulating, so that the evidence that this is the usual mode of transmission of this disease is entirely overwhelming.

*REMARKS ON THE ETIOLOGY OF NEOPLASMS—WITH A CASE.

By A. F. Jonas, M. D., Omaha, Neb.

No question in pathology has been the subject of so much controversy; no abnormal condition has been the incentive of so much speculation; no morbid change of tissues has been the object of more laborious research, careful and painstaking investigation, and yet there is no chapter in the whole science of pathology about which we have so few positive facts, as the question of the *etiology of neoplasms.*

It is true, we do not stand in want of theories to explain their origin. The very fact that hypotheses on this subject have been almost as numerous as there have been investigators, proves the weakness of most of them. The student who earnestly approaches this subject is soon lost in a multiplicity of speculations from which, with difficulty, he extricates himself. We are lost in amazement at the wild flights of the imagination in attempting to solve this problem. We sometimes marvel at the fertility of the mind, when dealing with questions, explaining phenomina observed in nature, but I doubt if any subject in the science of medicine has so much induced the activity of fertile imaginations to construct ingenious theories as the question of the origin of tumors.

Without going too extensively into details, it might be interesting, as well as profitable, to discuss several of the more important theories in connection with this subject.

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*Read before the Medical Society of the Missouri Valley, Dec. 20, 1888

The topic under discussion was suggested by the following case, which seems to add support to a theory, which more than any other one, became quite generally accepted at one time, but of late has lost many of its adherents.

Edith T., aged 23 months, is well nourished, well developed.

The mother first noticed when the child was four months old, a very small, hazel nut sized "lump" in the left cheek, a little below and posterior to the molar bone. The child otherwise was in perfect health. The small nodule gradually increased in size until the entire cheek became involved. It was also observed by the mother that the vault forming the roof of the mouth was losing its symmetry.

Status preasens—The left side of the face is enlarged and hypertrophied. A circumscribed firm tumor can be detected occupying the entire left cheek. The palate and alveolar processes of the left superior maxillary occupied a much lower position in the mouth than those of its fellow on the opposite side. The outer curve of the left superior alveolar process was much flattened, and contained four or five illy developed teeth. This deformity seemed to be the result of external pressure of the tumor, which seemed to have interfered with the development of the superior maxillary in its normal direction. The left nostril, although somewhat narrower than the opposite one, was not otherwise deformed and admitted of free nasal respiration.

Operation.—Under chloroform narcosis, an incision was made, beginning over the site of the zygomatic process of the molar bone, extending downward to a point nearly midway between the angle of the inferior maxillary and the symphasis. The enucliation, although somewhat tedious, was accomplished without much difficulty. The growth occupied all the space inclosed by a line drawn from the zygomatic process of the molar bone to the angle of the inferior maxillary behind, and extending to the border of the infraorbital ridge above, the wing of the nose and angle of the mouth in front and the lower border of the horizontal ramus of the inferior maxillary below.

Union occurred per primam. All stitches and drainage tube were removed on the eighth day.

The microscopial examination showed that we had to deal with a pure fibroma.

The chief point of interest in connection with this case is the undoubted congenital or embryonic origin of this neoplasm. We call to mind at once a theory which dates the origin of all tumors back to the embryonic state, that their beginning is always in an embryonal matrix.

Whether or not this theory is founded upon sufficiently strong evidence, upon actual observation, will depend upon an investigation of the ground upon which the author, of the theory of the origin of tumors in an embryonal matrix, has based his conclusions.

After reviewing the various theories propounded to explain the etiology of neoplasms, Cohnheim says: "One more theory only seems to remain, that of the congenital predisposition or embryonal origin." Such a view had already been conceded for teratoma. Leuke had shown that dermoids were always congenital formations, due to excessive inversions and indentations of the epiblast in the formation of the eyes, mouth, neck, testes, ovaries, etc. These excessive indentations are insinuated into the tissues with a subsequent contraction at the surface. They become isolated and form a matrix for the future formation of dermoid cysts. Cohnheim could see no objection to an application of the same theory to the origin of all forms of neoplasms, such as the histoids and organoids of Virchow. He believed that in an early stage of embryonic development more cells were produced than were necessary for the construction of a given organ or part; that a quantity of superfluous cells remained unused, but which—on account of the embryonic nature of the cells—possessed great powers of proliferation. He considered this embryonic over-production of cells an irregularity in embryonic development, in which we must look for the cause of the neoplasm in later life.

Cohnheim found some support in his theory of the great proliferating powers of embryonic cells, in the experiments of Zahn and Leopold, who have shown that tissues of animals (already born) when introduced into the anterior chamber of the eye or the peritoneal cavity, were constantly absorbed or underwent great atrophy, while tissues taken from the living (unborn) embryo, not only lived, but grew in a most astonishing manner.

He speaks of the heredity of tumors to support his views; although we have no positive evidence on the question of heredity, yet the probabilities are very strong, that a tendency is transmitted from parent to child. This probability rests on a large number of observed facts. The literature is rich with communications showing the existence of tumors in several generations of the same family. Especially is this true of carcinoma, enchondroma, lipoma, angioma and neuroma. The inheritence seems alike from maternal and paternal sides. The neoplasm in very many instances seems to repeat itself in the same locality, for instance, supernumerary fingers on the same extremity. For generations we note an adenoma or a carcinoma in the mamary gland, sometimes an enchondroma of the pelvis, in others, on the humerus.

The appearance of congenital growths, with a history of heredity, are not so frequent, for example, we have a teratoma in one member of the family, another with an angioma, or a pigmented neavus.

Small subcutaneous fibromata and lipomata are not rare. Enchondroma of the skull and the spine, myxoma of the jaw, adenoma and sarcoma of the kidney, with a history of hereditary transmission, are comparatively numerous. It is true that congenital growths comprise a very small per cent. of the large number of tumors that we have to deal with, and the theory of heredity would be weak, indeed, if Cohnheim's teaching depended alone on these; but still they point to the probable existence of an embryonal matrix. A nodule may be so small as to entirely escape observation—like the case I have described at the beginning of this paper—yet it may be the nucleus out of which, at some later date, a large fibroma or lipoma or adeoma may develop A small pigmented neavus may be the beginning of a melenotic sarcoma. Out of an insignificant cyst may spring a dermoid.

It is not impossible that between the physiological elements may exist a group of cells that cannot be detected by any means at our command. This, according to Cohnheim, seems to be the case with the majority of growths, that is, they develop from a matrix so small as to be indistinguishable. The newborn do not bring with them the growth itself, but the erratic deposit of superabundant embryonic cells, out of which, under favorable conditions, a neoplasm develops, as Ziegler puts it, "these embryonic deposits have an abnormally strong vitality."

Although he admits the importance of a trauma as an etiological factor, yet he ascribes to it very little importance. He shows in a table of statistics taken in Langenbeck's clinic, by F. Boll, that in spite of the most searching inquiry, that in only 12 per cent. out of 344 cases operated upon for carcinoma, could any evidence of a trauma be obtained.

When you ask, What is a favorable condition to excite an embryonal matrix to rapid proliferation, and what holds it in check? He answers, it is perhaps the resistance of the normal tissue elements that prevent the proliferation of the embryonic cells. A trauma might so reduce their resistance as to permit the formation of a growth; above all it is necessary that we have an increased blood supply.

It is a well known fact that certain forms of epithelial growths, as carcinoma and cancroid, have a favorite seat at or in the natural orifices, i. e., the lips and tongue, the nose, eyelids, on the prepuse, glans penis, and rectum, also comparatively frequent on the os uteri. Virchow thought this was due to the constant mechanical insults to which these parts were exposed. Cohnheim doubted this, because when we consider how frequently and constantly hands and feet are exposed to mechanical insults, this theory seems to lose its weight, and we must look for another factor. The natural orifices of the body are in such situations, where, during some stage of embryonic development, certain complications take place. At these orifices, the epiblast becomes indentated and inversions take place to unite with the epithelial duct formed by the hypoblast. The epithelium of the two germinal layers is essentially different. At this juncture, he thinks, irregularities can easily take place, and superabundant epithelial groups may be displaced, establishing an embryonal matrix. In the rectum we do not find carcinoma at the external sphincter, which is most exposd to irritants, but at the point where the intestinal tube, containing epithelium, formed by the hypoblast, is united to the anal inversion of the epiblast, above the internal sphineter. We seldom find a cancer on the vulva, which is most exposed to mechanical irritation, but at the point where the pavement epithelium of the sinus urogenitalis joins the cylinder epithelium of Muller's ducts, the external os uteri.

Not only do cavernous tumors seem to have certain points of predilection, but other growths manifest this same tendency. Every one knows that by far the largest number of myomata have their seat in the uterine wall. The uterus possesses the capability, under certain conditions, to develop after the remaining organism has attained its normal growth. Cohnheim attributed this growth to the presence of embryonic foci. If this growth can take place under physiological conditions, as in pregnancy, he believes it to be possible that an irregular development, in the absence of pregnancy, and particularly where pregnancy has never occurred, can occur.

Myoma and adenoma of the prostate—usually termed hypertrophy of the prostate—gives another example of development from erratic deposit of embryonic cells at the junction of the sinus urogenitalis of the epiblast with Muller's ducts.

He found distinct evidence of embryonic structure in a number of formations, for example, the cavernous angioma, which not only deviates in its form from an ordinary blood vessel, but the microscopic structure of its lacunæ has only a slight resemblance to normal vascular walls. The cells have great resemblance to those in the embryo.

Virchow called attention to the fact that in amylitic neuroma, the nerve fibres were very fine and rich in long, oval nuclii. Very distinct is the embryonic character of the muscular fibres of the striated myoma, appearing, according to all observers, as very narrow fibres, without a distinct sarcolemma and sometimes as striated spindle cells.

The best example of the embryonic nature of neoplasms, we find in the myxoma and myxosarcoma. The myxoma consists of a gelatinous, transparent, mucin mass, in which are imbedded, round, spindle and stellate cells, in larger and smaller quantities.

Strong as the objections grew from time to time, to the teachings of Cohnheim, yet no theory had been proved, that found so many advocates, and none seemed to stand so firm. And to-day we know of no one theory that so well seems to explain the origin of tumors.

As plausible as the theory of Cohnheim seems, yet when we consider, that we know nothing of the persistence of embryonic tissue in its strictest sense, that is, its anatomical demonstration is impossible, we must admit that an important factor of strength is wanting. It is even difficult to imagine, the persistence of embryonic cells in the tissues, when we consider, that no cell in the human organism, preserves its identity beyond a very limited period of time, that there is a constant renewal and change in all cellular tissues.

Cohnheim and Maas have shown that if periostium is transplanted, into lung tissue, for example, it is true it sometimes lives for a considerable period, but eventually it becomes absorbed.

It seems to me, that an embryœal matrix lodged in the tissues, must either remain embryonic, and is in the nature of a foreign body in the tissues in which it is imbedded and becomes absorbed, or it takes on the anatomical and physiological characteristics of the tissues in which it lies, and very soon loses its embryological character, or such a matrix might possibly develop into an independent formation, in which instance we find the so-called congenital tumors.

Of the many views which stand in opposition to those of Cohnheim, is the *irratation theory*, as first proposed by Virchow. For a time it was lost sight of, but its claims for recognition were so many, and so strong, that it again began to occupy a very important place in pathology. Many new observations added strength to it, so that to-day we are prepared to say, that beyond a question of doubt, there are some forms of neoplasm, which develop in consequence of a prolonged irritation of the integument and mucous membranes.

Shuchard, in his excellent monograph on the *Origin of carcinoma in inflammatory conditions of the mucous membranes and integument*, seems to fortify the irritation theory of Virchow, by giving the clinical history of a number of cases suffering from psoriasis buccalis; and with dermatitis in parafine workers and chimney sweeps, followed by carcinoma.

When examining a carcinomatous mass, we always observe an extreme vascularity with a cellular infiltration in the youngest part of the growth, almost like in inflammed tissue. The question might be asked, is it not possible that the increased vascularity, with a consequent increased nourishment of the tissues, is favorable to increased epithelial proliferation? Is it not possible and even probable, that a chronic inflammatory process, of a local nature, to which is applied a frequently repeated or constant irritation, eventually can lead to carcinomatous degeneration? These questions deserve a most earnest consideration.

Every surgeon can recall instances, where on a chronic ulcer of the leg, in a necrosis, fistula, in burns or a lupus, a transformation to carcinoma has taken place. Who has not seen an epithelial cancer develop in the mouth in consequence of a long continued irritation of a decayed tooth?

We can all recall instances where a blow was followed by the appearance of a sarcoma.

Shuchart speaks of a "peculiar chemical body" which under normal conditions occurs very sparingly, and wherever observed, seems to stand in intimate relationship to the hornification of the epidermis. This is the substance termed *eleidin* by Ranvier. Langerhans has shown that this eleidin is formed constantly beneath the epidermal layer throughout the body, and is known as the *kœrnerschicht* or *Langerhans schicht* or *stratum granulosum Unna.*

According to Ranvier's investigations,this *stratum granulasum* occurs only in warm blooded animals and is not confined to the epidermis, but appears in the epithelium of the mouth, œsophagus and stomach. Waldeyer has also found eleidin in birds and reptiles, and he believes it to be of great importance in the hornification process. He finds in the line between the hornified layer of epithelium of the epidermis and the deeper and softer epithelia, everywhere a peculiar substance in the form of smaller and larger glistening granula, which are situated intracellular. Recklinghausen, who has investigated this substance, has given it the name of hyaline substance.

Ranvier and his pupil, Suchard, made the first investigations of eleidin from a pathological standpoint, and found in all formative processes of the epidermis, which lead to hypertrophy of the horny layer (warts and papilloma), a thickening of the stratum granulosum and an increase of the eleidin. In processes which lead to bleb formation or expoliation, there is a diminative of eleidin.

Shuchart found, in sections taken from psoriasis bucclais—stained with ammonio picro-carmin—that the eleiden zone appeared, under low power, as a broad red granular layer, lying immediately under the horny layer of the epidermis. By stronger power it was noticed that the eleidin formation usually appeared in the fifth and sixth epithelial layer of the hornified zone. It is in this eleidin zone that the most active cell proliferation takes place. Schuhart agrees with former observers, that the eleidin is an important factor in the hornification process. In sections of pavement epithelial cancers of the mouth—which had developed on the site of an old proriasis—it was shown that at such points where the hornified epithelium was thickest the eleidin was most abundant, and where there was a loss of epithelium or beginning ulceration it was absent.

He cites a large number of cases of psoriasis buccalis et lingnæ and of hyperplastic dermatitis as are often observed with tar and paraffine workers and chimney sweeps, which in the course of time become transformed into carcinoma. Many cases of facial seborrhagia followed by carcinoma are given. He shows that so-called paraffine and chimney sweepers cancers, or seborrhagic cancers, seldom occur in persons of the better classes, but that they are confined to the working classes, particularly those of uncleanly habits. Volkman has shown that the exciting cause to the forms of skin cancer mentioned, lies in a want of care of the skin. Since this fact has been recognized, all paraffine workers employed in the paraffine works near Halle have been compelled to take a full bath before leaving the works at night, and paraffine cancer has become a very rare affection among them.

Another theory which commanded some attention a few years ago, but at the present time is believed in and advocated only by its originator and his pupils. Of all theorectical innovations this was the most novel. I refer to the *rejuvination* theory of Stricker of Vienna. He believes that all tumors originate from indifferent medullary or embryonic elements in nearly the same manner as that by which physiological tissue is produced. No tissue can increase or pass into another, except through an intervening stage of medullary tissue, and no tumor arises from normal tissue without the latter first passing through the same intervening stage. In accordance with his theory, that in inflammatory processes the tissues return to a juvenile condition, in which the cells are enlarged, become amœboid and proliferate, he attempted to explain the etiology of neoplasms.

The microbic theory has received its share of attention since many years, but no one has been bold enough to announce the result of his labors with the positive statement, that he had found the true microbe of cancer, until of very recent date, when a host of them appeared in rapid succession, each author with his particular pet, differing in form and size from every other.

In an address before the Verein fuer Innere Medizin at Berlin, November 7, '87, Scheuerlin described a micro-organism 1.5–2.5 mm in length and 0.5 mm wide, which grows easily in culture mediums of sterilized pleuritic exudate. It grows rapidly in the form of a whitish film over the surface of the culture medium. The bacillus was easily stained by the usual methods and exhibited spores. It grew rapidly on potatoe cultures. The bacillus was found in the fluid substance of ten different mamary cancers, five cases of epithelial cancers of the cervix uteri, and three metastatic liver cancers, all taken immediately after extirpation. No bacilli could be found in prepared sections.

Inoculations were made on the hinder breast glands of six bitches. Two were killed, one after twenty-eight days and the other after thirty-five days. The post mortem examination showed in both animals, at the point of injection, a circumscribed firm tumor the size of a bean. It could not be determined if it had originated in a lymp gland or in the tissue of the milk gland. Microscopically can be noted, exhuberant cell proliferation, enlarged distinctly granulated cells, which certainly deserve the name of epitheliod and in which, as in carcinoma, are to be observed glistening spores. Scheuerlen closed his address by saying that he believed that this bacillus stands in close relation to carcinoma; that it is the etiological factor in carcinoma.

In the discussion which followed, Guttman expressed himself as being of the belief that the bacillus of Scheuerlen was the true bacillus of carcinoma.

Fraenkel did not seem so firmly convinced; he hinted at inaccuracies in the investigations. He expressed the belief of the possibility of the tumors resulting from the inoculations, as being ordinary granulation tissue. He refers to the rule that the microbe of pathological processes which develope slowly, requires much more time for its growth than a micro-organism of morbid processes that run their course rapidly. The microbe of Scheuerlen developed in twelve hours when transferred to a culture medium, while a carcinoma develops very slowly. He also referred to the omittance of making plate cultures, which is so necessary for isolating the different microbes. He doubts that the microbe described is the cause of cancer.

Schill, of Dresden, an army surgeon, also claims to have found a microbe in carcinoma and sarcoma, but it differs in many respects from the microbe of Schenerlen. These announcements were soon followed by a host of others—Dr. Barnabei, professor of clinical medicine at Sienna, and Dr. Sanarelli, a graduate of the same school, have each described their cancerous microbe. France also came forward with its claim for distinction with Dr. Perin. Brazil sought to establish its bacteriological renown in the person of Dr. Domingos Freire. But, strange to say, no two observers have described the same micro-organism.

And now, as we cast a retrospective glance over the foregoing, and weigh each question with a view to decide for ourselves, whether or not we have found in the theories spoken of, the real etiological factor, we are presented with a problem that is not so easy to solve. Cohnheim has brought so much evidence in support of his views, that we must admit that the origin of many forms of tumor, with our present light on the subject, can be explained in no other way. Yet we cannot admit that the whole catergory of neoplasms owe their beginning to an embryonal matrix, particularly many tumors that begin in adult life. It does not seem reasonable, when we consider the biological characteristics of cell growth, that an embryonal matrix should retain its embryonic character to mature age. We might make an exception for those forms of carcinoma that are situated at those points where there is a blending of the epiblast with the hypo-blast, where the epidermal epithelium may become mixed, as it were, with the epithelium of the mucous membranes, or where there is a possible mixture of pavement with columnar epithelium, and becomes insinuated into the deeper tissues.

I adhere to Cohnheim's theory, as applied to the origin of many formations, simply because we have no working hypothesis, if I may so call it, that so well explain their origin.

I regard the *irritation theory* of Virchow, as has been so well supported by Shuchart, in his dissertation on carcinoma following prolonged irritation of the integument and mucous membranes, to be well founded, and I believe that long continued irritation, can so stimulate epithelial cell proliferation so as to develop carcinoma without the presence of an embryological matrix.

I do not believe we are warranted in making any positive deductions, for any form of tumor, from what knowledge we possess at present on the bacteriological origin of neoplasms. The observations have not been of sufficient number; the results have not been definite. The methods of experimentation were faulty and incomplete, and no two observers have described the same microbe.

Stricker's theory must be regarded visionary in the extreme, and will hardly admit of much discussion.

Reviews.

WOODS MEDICAL AND SURGICAL MONOGRAPHS, Vol. 2, No. 1, April, 1889. Contents: On Diabetes and its Connection with Heart Disease, by Jacques Mayer, M. D.; Blenorrhœa of the Sexual Organs and its Complications, by Dr. Ernest Finger.

Mayer holds that in a considerable number of cases of diabetes, hypertrophy and dilatation of the heart become developed without there being any morbid changes in other organs, such as kidneys, arteries, etc., which so frequently lead to these affections. He looks upon these anatomical lesions of the heart in diabetes as traceable to morbid changes of metabolism, viz.: as consequences of glycæmia and azotæmia.

The forms of heart disease which occur in diabetes are owing to the circumstance that the kidneys are unable, after a time, to continue the excessive efforts which they are called upon to make in eliminating excess of sugar and urea; that their compensating functional activity gradually decreases, and that this leads to increased cardiac action, hypertrophy and dilatation.

The second article on Blenorrhœa of the Sexual Organs and its Complications is one of the most complete expositions of the subject that has been published in recent medical literature.

Finger traces the origin of gonorrhœa as simultaneous with that of the human race. He believes in the specific character of the gonococcus, without which there is no clap. The questions of infection and treatment are based upon this view of the pathology of the disease.

The article is one of the most scholarly and complete ever offered on any topic by these enterprising publishers.

JAMES CARTER, M. D.

MERCK'S INDEX. This valuable publication, which has been promised to the drug and pharmaceutical profession for a year past, has finally made its appearance.

It is a peculiar book, *different from any other chemical catalogue we have ever seen*, and is truly, as its title page says, a compendium "of whatever chemical products are today adjudged as being useful in either medicine or technology;" and "a guide for physicians, apothecary, chemist and dealer." At the same time it is a most complete and valuable price-book, giving standard trade-values for nearly the whole line of Merck's standard chemicals, embracing upwards of 4,000 different articles.

The make-up of the book is neat and durable, and cheap at the price of one dollar. The publisher is E. Merck, the manufacturing chemist of Darmstadt, London and New York. The volume is free from the offensive features of catalogues and price-currents generally,—the large display of advertising, which is characteristic in such publications, being absent from this valuable and interesting work.—*Review*.

CIRCULAR FROM THE SECRETARY OF THE NEBRASKA STATE MEDICAL SOCIETY.

Below will be found all the papers hitherto announced to the secretary. Members and applicants for membership, who may have interesting cases to report, or who will yet prepare papers, will be given every opportunity to present the same.

All the railroads in the state have consented to carry persons going to the meeting for one and one-third fare, round trip. Persons who will have to take *several roads* to reach Kearney, should, in buying their tickets *at the starting points of each road, secure a certificate or receipt*, which, when countersigned by the secretary, will entitle them to the reduction.

The citizens of Kearney, through the untiring labors of the chairman of the Committee on Arrangements, Dr. G. L. Humphrey, his colaborers on the committee, and the profession of Kearney, have promised the Society a reception and banquet at the Midway Hotel, on the evening of Thursday, May 23.

The Society will meet in annual session at Masonic Hall, Kearney, Neb., May 21, at 7:30 P. M. sharp.

All evening sessions are set aside by constitutional provision for the transaction of business alone. The morning and afternoon sessions must be devoted entirely to scientific work.

A PARTIAL PROGRAMME.

The Jugulation of Acute Diseases, by L. A. Merriam, M. D., Omaha.

A Case of Concussion from an Explosion of Giant Powder, by A. B. Somers, M. D., Omaha.

A Case of Atresia Hymenalis with Menstrual Retention, by E. A. Benton, M. D., Central City.

The Best Treatment of Epithelioma, by W. O. Henry, M. D., Pawnee City.

Some Cases of Puerperal Eclampsia, by A. B. Anderson, M. D., Pawnee City.

Operative Treatment of Coxitis, by A. F. Jonas, M. D., Omaha.

The Pathology and Treatment of Gonorrhœal Conjunctivitis, by H. Gifford, M. D., Omaha.

The Present Aspect of Inoculation and Vaccination for the Prevention of Disease, by A. S. v. Mansfelde, M. D., Ashland.

A Report of an Epidemic (local) of a Nondescript, by M. L. Hildreth, M. D., Lyons.

Practical Hints on Some of the Diseases of the Eye, by W. L. Dayton, M. D., Lincoln.

My Malpractice Case and What Became of It—An Experience, by M. V. B. Clark, M. D., Sutton.

A Case of Neurasthenia with Active Cerebral Hyperæmia a Prominent Factor, by F. A. Long, M. D., Madison.

Vaginitis in a Child—Membranous Dysmenorrhœa—Report of Two Cases, by Mary R. Butin, M. D., Dorchester.

Typhlitis and Perityphlitis with Report of Cases, by J. W. Bullard, M. D., DuBois.

Observations on Some Modern Surgical Procedures; also

The Removal of Foreign Bodies from the Larynx; also

An Unusual Product of Intra-uterine Life with Presentation of Specimen, by J. E. Summers, Jr., M. D., Omaha.

Add to these papers the reports of the respective chairmen of sections, who are, to judge from late precedents, all of them likely to report in their respective spheres, and no one can doubt for a moment that those scientifically inclined, as well as those of social proclivities, will each find abundant reasons to make extra exertions to attend the meeting at Kearney. Very respectfully yours,

A. S. v. MANSFELDE, M. D., Sec.

Quality Hill, Ashland, May 6, 1889.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.
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1110 Farnam St., Omaha, Neb.

OMAHA, MAY, 1889.

ANTISEPTIC MIDWIFERY.

A most excellent paper, embodying a comprehensive resume of the most advanced opinions of the present day on the above subject was read at the last meeting of the Omaha Medical Club, which will appear in full in a subsequent issue of this journal. It will well deserve the careful perusal of every subscriber, as giving in a terse and succinct manner the results of all past experiences in this line of medical practice.

There is scarcely a shadow of a doubt in the minds of the profession at the present time but what the dread puerperal fever is a contagious germ disease, and that the occurrence of this very fatal disease in any given case must be brought about by the conveyance of the specific germ through the ostium vaginæ into the utero-vaginal canal, where it finds a suitable nidus, accompanied by conditions favorable to its further development and indefinite multiplication, to be followed in turn by its entrance into the circulation, systemic infection, and all the consequent horrors of destruction of the corpuscular elements of the blood and morbid influences on the nerve centers.

This constituting the essential pathological and etiological factor in the disease, the plain indication is to interpose an efficient barrier at the vulva to the entrance of these germs into the utero-vaginal canal. This can be accomplished in a most satisfactory manner by means of the antiseptic pad and the aseptic hand of the accoucheur. The former constituted of alternate layers of antiseptic absorbent cotton or marine lint, gauze and oiled silk, to be changed three to four times daily; the latter by the free use of hot water, nail brush, and antiseptic soap. These are the two essential factors of antiseptic midwifery in private practice. In hospital practice many more details are necessary with reference to the care and antisepticism of room, bedding and attendants.

The douching of the uterine or vaginal canal with or without the addition of antiseptic agents, seems not to be essential except when demanded by positive and especial indications.

Carbolic acid should never be used as an antiseptic in this direction. It is a *weak and inefficient germicide;* it is an irritant, tending to prevent union by first intention, and when used in sufficient strength to destroy disease germs, it is toxic to the human economy. The best aseptic agent is boiled water, to which can be added when called for, bichloride of mercury in the proportion of $\frac{1}{5000}$ or even less. If the washing out is called for frequently, the mercuric solution may be alternated with a saturated solution of boracic acid, since the mercuric solution, when used too frequently or continuously, and in too great a proportion, is capable of producing serious and even fatal poisoning.

JAMES CARTER, M. D.

THE thirty-ninth annual meeting of the Illinois State Medical Society will be held in Jacksonville, beginning the 21st of May. We notice from the programme that an effort is to be made to form a new constitution, on the ground that the old one is totally inadequate to the purpose for which it was designed. Illinois ought to furnish a Model Constitution.

WE LEARN at this late hour of the appointment of Dr. M. W. Stone, of Wahoo, as superintendent of the Insane Asylum at Hastings, Nebraska. The selection of Dr. Stone is a tribute to a gentleman well deserving any honor the State may have to confer.

FROM the daily papers we learn that the Iowa Board of Health recommends a four year course in all Iowa Medical colleges after 1891. Iowa seems to be waking from her long sleep.

Members of the Nebraska State Medical Society will please read the circular of Secretary Mansfelde, in this number of the **Clinic.** The indications are favorable for an excellent meeting, and the reduction made by the railroad companies to one and one third fare for the round trip, will induce some to go who had not intended to on account of the expense. Let us have a large meeting.

Surgical Progress.

Skin Grafting According to Thiersch.—(By E. Plessing, (Leipzig) *Archiv. f. Klinische Chirurgie*, bd., 37, hft. 1.)—Reverdin's important discovery of skin grafting in 1870 soon found its application in hospital practice, but lately it has fallen into disuse on account of two faults, one an after contraction of the skin covered granulation surface, the other is a separation of the healed skin.

Thiersch states that the healing of a granulating surface depends on two factors, viz.: first in the changing of the soft succulent blood-carrying granulation papillæ into the bloodless dry cicatricial papillæ, a result which brings about a diminution of the surface and the drawing together of the neighboring parts. Second, a covering over of the contracted papillæ with epidermic cells. Both of these factors, the contraction of the wound and the growth of the pellicle take place together within certain limits, and when these limits are reached the granulating surface remains stationary.

If skin be placed on granulations which have not attained their maximum of contraction the process keeps up under the transplanted skin, and there results the drawing together of the part with all the evils of cicatricial contraction.

If, on the contrary, the skin be applied to a granulating surface which has reached its maximum of shrinkage, a further contraction will not take place, but the succulent granulations remain under the healed skin, and the slightest mechanical irritation is sufficient to stir up hæmorrhages or exudations, this causing the falling off of the skin which has been placed over them.

If these theories be true then both bad results of skin grafting are in a measure, due to the construction of the granulation tissue. Perpendicular sections show clearly two layers in granulating tissue, a lower layer, more or less dense, according to the age of the granulations, and in which the capillary network occupies a horizontal position, and from this dense layer the vascular branches run out perpendicularly, and form the upper or warty layer.

This upper layer plays the important part in the shrinking process as well as in the insecurity of the result. On account of this, Thiersch proposed to remove this upper stratum before transplanting the skin. Prof. Mass says the important point for success is the way in which the freshing up has been done; it is not only necessary to freshen up the edges of the ulcer, but above all, it is important to remove thoroughly the upper layer, and to expose completely the lower one with its horizontal capillaries, and between this layer and the transplanted flap a thorough adhesion will take place which can never be disturbed by cicatricial contraction.

The way in which skin grafting is carried out in the Leipsic Clinic is as follows:

Complete disinfection of the part from which the skin is to be taken, (any disinfectant may be used, but during the operation a 6 per 1,000 sterilized salt solution is employed) then in the granulating wounds all the soft granulations are scraped away with a sharp spoon, the bleeding surface irrigated with the salt solution, sponged, covered with protective and compressed for five or ten minutes till hæmorrhage has ceased. It is important that the right stage of granulation development should be reached before operating. The results are best when the granulations are about six weeks old, and their growth has been limited by repeated cauterization and compression. When the wound is thoroughly prepared the skin grafting begins. The skin of arm and thigh is most often employed.

The skin free from fat, must be well stretched by the left hand, the right hand carries a razor with a long, wide and concave blade. The razor is held flat and is slowly drawn with a sawing motion through the upper layers of the skin. During this process the knife must be kept moist with the salt solution. The transferring of the grafts from the prepared surface takes place immediately, the blade is laid on the wound and the edge of the graft is drawn over onto the wound by means of a probe, and as the blade is withdrawn it slips into place. The position of the graft may be corrected at will either with a probe or a small brush. The flap may also be shortened if necessary. The complete area is to be covered with strips of skin, and these strips should overlie the edges of the wound and come together as close as possible, even overlapping each other slightly. The skin is gently pressed in place with a spatula. The dressing to be applied should protect and maintain the skin in its new position. The results are better when a moist dressing which is changed daily is used. The neighborhood of the wound is smeared with oil to prevent the dressing from sticking.

The grafts are covered with a strip of protective, soaked in salt solution, over this comes a pad of cotton, also moistened with salt water. This pad is covered by a large piece of protective, then comes another pad of dry cotton, and all is held in place by a cotton bandage, over which a dextrine bandage is applied to prevent slipping. If a dry dressing is to be employed, an iodoform one is the best. The places from which the skin has been removed are covered with iodoform dust, a dry dressing applied and left for one or two weeks.

The changes which are to be observed in the grafts within the first few days are as follows: If they are of a pinkish color success is pretty certain; if white, they will drop off in a few days; blood under a graft gives it a blueish color, endangers the healing process, but does not always lead to suppuration. It is possible for various forms of bacteria to find entrance into the wound and prevent healing; to do away with this danger, the dressing should be changed every day for the first week, and the surface irrigated with sterilized salt water.

If the wounded surface is not covered with grafts there appears on their free border a fibrinous exudation, and separation of the grafts begins, the healed ones detach themselves, or small epidermal blisters filled with pus appear on the healed spots and form small ulcers which gradually increase in size.

It also happens that the super-imposed skin is broken through from below by granulations, and in this manner disappears, at least, temporarily, but later when the granulations recede the epidermal islets are again seen. This the author does not believe to be due to an infectious process, but thinks it is because the grafting has been done too soon.

Syphilis may prevent the grafts from healing. The author analyzes a series of forty cases, in which transplantation was carried out 78 times, 17 times on fresh wound surfaces, 61 times on scraped granulated surfaces. In 58 times the healing succeeded perfectly, 12 times it was incomplete and 8 times it was a total failure and the proceeding had to be repeated.

In summing up he lays stress on the following points: Careful disinfection of the hands and instruments, newly prepared sterilized salt solution (6 per 1,000), proper choosing of time of operation, thorough hæmostasis, most complete covering possible of the wound with strips, immobilization of the part, careful bandaging, daily changes of dressing, accompanied by thorough irrigation.

The results are better on scraped granulation surfaces than on loose or connective tissue (fascia, periosteum), glandular and muscular tissue give pretty good results. Spongy-bone tissue and exposed tendons yield no permanent result. Adhesion of grafts has never been obtained on compact bone.—*Annals ot Surgery.*

SYPHILITIC REINFECTION WITH PERSISTENCE OF PREVIOUS SYMPTOMS.—Dr. Augusto Ducrey reports (*Giornale Italiano delle Malattie Veneree e della Pelle*, December, 1888,) the case of a woman, forty-six years of age, who many years previously had contracted syphilis while in intimate relations with a woman in the early secondary stage of the disease. There was a complete history of full secondaries, roseola, characteristic pains, adenopathy, etc. Shortly after she married, and, with the exception of a soft sore contracted from her husband, remained healthy for ten years. At the end of that time the husband, after an impure connection, developed an indurated sore, followed by indolent buboes, roseola, mucous patches, etc., and soon after she presented herself for examination. She showed a characteristic gumma of the scalp, multiple cicatrices of pustular and tuberculo-ulcerating syphilides, and atrophic scars of recent date following the reabsorption of dry tubercles, while, at the same time, she showed a specific cicatricial induration of the right labium major, universal poly-adenopathy, a maculo-erythematous syphilide on the trunk and limbs, mucous patches on the soft palate and the velum, syphilitic fever, and rheumatoid pains. The coincident infection of the husband, of course, threw much light on the case. The gummous and tubercular character of the old lesions was unmistakable, the only possible lesion with which they could have been confounded being lupus, from which they differed widely in the character of the sores, the crusts, the age of the patient, and the history of the case. The recent eruption became finally a very widespread small pustular (acneform) sphilide, which involved every portion of the cutaneous surface but the face; the osteocopic pains became intense and unbearable; ulcerating mucous patches developed, together with extreme tumefaction of the inguinal glands, and a severe iritis of the left eye. At the same time the sore upon the scalp deepened and assumed the unmistakable characters of a deep gummatous ulceration. (The condition of the scalp and the general surface at this time is illustrated by two chromo-lithographs.) The case resisted treatment for some time, but was finally cured by means of hypodermic injections of corrosive sublimate. Dr. Ducrey draws the following conclusions:

1. Syphilitic reinfection is possible.
2. It may occur even during the existence of tertiary symptoms due to the preceding infection.
3. The pathological effect of the second inoculation may be precisely those of an ordinary syphilis, with the same succession of identical symptoms; or the second attack may even be one of special gravity.
4. The reinfection of a subject of previous syphilis is not a certain proof that he was cured at the time of the second infection, and therefore the possibility of reinfection is not decisive evidence of the curability of syphilis. *American Journal Medical Sciences.*

GONORRHŒA AND ITS RELATIONS TO SALPINGITIS.—Dr. J. William White reports (*British Medical Journal*, February 9, 1888,) a case of removal of the uterine appendages for disease consecutive to gonorrhœal infection; emphasizes the difficulty of recognizing some forms of venereal diseases in the female; and discusses the views of Noeggerath, Sinclair, and other gynecologists, which he believes to be extreme. He arrives at the following conclusions:

1. Gonorrhœa in the male is an entirely local and thoroughly curable disease.
2. The so-called "latent" gonorrhœa is due to changes in the mucous membrane of the urethra which, while they may be due to the persistence of a specific microbe, are apparently explicable by other circumstances, namely, the delicacy of the mucous lining of the urethra, and the conditions of approximation of its surfaces during the intervals of micturition, which is here, as elsewhere, unfavorable to the disappearance of granular or injected areas, or of the traces of inflammation; the periodical passage along the canal of a secretion, the urine, which is especially liable by reason of changes in its constitution to become an actual irritant; the exposure of the whole region at times of erection to intense congestion of its vessels; the effect of gravitation, the proportionately excessive supply of blood to the region, and the absence of extravascular resistance due to the elastic character of the spongy tissue, all after a first attack of urethritis. When in addition we consider the frequency with which gonorrhœa produces submucous thickening at some point in the urethra, causing an encroachment on the calibre of the canal, and, from obvious mechanical reasons, the production of discharge, we can understand that many of the cases of "latent" gonorrhœa can be explained without reference to the existence of a specific poison.
3. While awaiting definite microscopical evidence upon the subject, it should not be forgotten that there are marked differences between gonorrhœa as we observe it clinically, and those diseases known to depend upon a specific poison. The absence of a definite period of incubation; the fact that it may be produced with all its characteristic

symptoms by a variety of agents, chemical, traumatic, and infectious; that it predisposes to, instead of protecting from, a second attack; that it is associated only with the ordinary processes of inflammation, and that it may be reawakened or produced at will by mechanical irritation, seem strongly to differentiate it from most specific diseases.

4. It is quite possible, even if gonorrhœa does not depend for its origin primarily or exclusively upon the gonococcus, that under certain circumstances the suppuration which accompanies it may favor the development of these or other forms of bacterial life, which in such cases might greatly increase both its contagious quality and the probability of its rapid extension in the infected individual. These cases in women constitute the class which comes most naturally under the attention of the gynecologist, to whom, indeed, they have usually been referred by the surgeon or general practitioner. They do not happen, after all, with great frequency, and, when they do occur, are by no means followed in all, or even in the majority of instances, by the serious and alarming sequelæ which have been described.

5. In many such cases a line of treatment which includes rest in bed, elevation of the pelvis, counter-irritation, hot antiseptic vaginal injections, and anaphrodisiacs with arterial sedatives, will result in cure.

6. In some instances gonorrhœa undoubtedly produces consecutively endocervicitis, tubo-ovarian abscesses, and pelvic peritonitis, and necessitates a resort to operation, but these instances are comparatively rare or exceptional. — *American Journal Medical Sciences.*

LIGATION OF THE UTERINE ARTERIES IN THEIR CONTINUITY AS AN EARLY STEP IN TOTAL OR PARTIAL ABDOMINAL HYSTERECTOMY. — The President then presented two specimens removed by laparotomy—a large carcinoma of the body of the uterus and a uterus containing large fibroids. The circumstances in each case had compelled the choice of the abdominal method in preference to vaginal hysterectomy, but he was inclined to believe that the preference should be given to this method in many cases in which vaginal hysterectomy was possible, because in both instances he had found that the ligation of the uterine arteries beforehand greatly simplified and expedited the removal. In both cases also he had made a total removal, and he asked the opinion of those present concerning the relative advantages of removing and of leaving the cervix. In the first case (one of carcinoma of the body) the growth had spread anteriorly so as to involve a portion of the peritonæum covering the bladder, a circumstance which he thought would probably have made the removal necessarily incomplete if it had been attempted by the vaginal method. The operation had been begun in the usual manner, by multiple ligation of the broad ligaments and of the uterus below the tumor, with a view to possibly leaving the cervix as a pedicle. However, in the course of the operation he had sought for and tied the uterine arteries near the uterus, and had then found that he could remove the whole organ easily and rapidly with the knife and scissors, and with but slight hæmorrhage. The operation had thus been facilitated so much that in the second case he had proceeded at once to tie the uterine arteries. In this case two large fibroids had developed in the anterior wall of the uterus, the lower one extending so far down that the cervix could not be felt *per vaginam*. The uterus had been drawn out through the abdominal wound and the uterine arteries found by palpation of the posterior surface of the broad ligaments close to the cervix; the overlying peritonæum had been divided and catgut ligatures placed about the arteries. A silk ligature had next been passed around the outer border of each broad ligament well below the ovary, to secure the ovarian arteries. Both ligaments had then been cut straight across, and the incision prolonged across the peritonæum covering the back of the uterus, and across the lower fibroid anteriorily. Through this incision the fibroid, together with the adjoining part of the uterus, had been readily pushed out and the organ severed just above the cervix, thus facilitating the subsequent removal of the latter. This had been effected by lifting it with a volsella while a hole was made with a blunt instrument forced through into the vagina anteriorily, and by cutting round it with scissors. The bleeding had been insignificant. A comparatively slight reflux of venous blood from the divided edges of the broad ligaments had been easily controlled by the temporary use of a long-bladed clamp.

In both cases the abdominal incision had been entirely closed, and drainage made through the vagina for the first three days. The first patient had now entirely recovered; the second (then in the fifth day) was doing well.

In all previous hysterectomies the speaker had left the cervix, and treated it extraperitoneally. In some of them cicatrization had been long delayed by the inevitable suppuration of the pedicle and the slow filling up of the funnel-like canal created by its retraction. He believed removal of the cervix preferable, unless it proved to have special disadvantages, such as defective retention of the intestines within the abdomen because of lack of support at the floor of the pelvis.

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THE PREVENTION OF SHOCK BY ATROPINE.—The President also recommended the hypodermatic injection of from $\frac{1}{75}$ to $\frac{1}{100}$ of a grain of atropine previous to giving ether for an operation. In the second of the two foregoing cases the woman had been etherized, so as to admit of a brief examination, a few days before the operation, and had come out of the anæsthetic in a deplorable condition, from which she had not rallied for several hours. For considerable periods the pulse had been very weak and even imperceptible. On the contrary, atropine having been given before the ether on the day of the operation, she was taken from the table with a pulse as good as before the operation began. The subsequent symptoms of shock had been very slight. He had used atropine for this purpose for five or six years, having first observed its control of the inhibitory action on the heart in certain physiological experiments. How much influence it exerted it was not always easy to determine, but he believed it to be of great value.—Dr. L. A. Stimson in *N. Y. Surgical Society*.

TUBERCULAR INFECTION FROM THE LOWER ANIMALS.—The question as to whether tuberculosis can be contracted by use of the flesh or products of tuberculous animals cannot be regarded as being definitely settled, but enough collateral facts have been observed to render the transmissibility of the disease probable rather than possible. Fowls have become infected by the sputa of tubercular patients, and hogs by the milk of cows in which there was tubercular disease of the udder or teats. The transmission of pulmonary tuberculosis in man from one individual to another is undoubted, and, unless the *Bacillus tuberculosis* is greatly modified in its passage through the lower animals, the danger of the infection traveling from animal to man would seem to be very great. If the bacillary origin of tuberculosis is admitted, there must be some agent or agents actively engaged in conveying the bacillus from one point to another. As tuberculosis is the most common of all human diseases, except the acute infectious disorders, the sources of vehicles of infection must be correspondingly common. That the atmosphere plays any important part in this must be doubted, except where there has been a very close intimacy between persons primarily and others secondarily attacked, and even then the other opportunities for the transmission of the bacillus are great. If the domesticated animals, particularly those whose flesh or products are used for food, are to be regarded as possible centers of infection, we should have a reasonable explanation of the commonness of tuberculosis. There seems to be an agreement among all who have investigated animal tuberculosis that it is much more common in cows than in any other animals, and that it is much oftener observed at the present time than ever before. Whether this latter fact is due to any actual increase in the disease or to better means of observation cannot as yet be stated. It is certain, however, that the conditions to which cows are now subjected are those which render them liable to the attack of any diseases to which they are susceptible. They are regarded as machines, and everything is subordinated to the production of as large a quantity of milk as possible with the expenditure of as small amount of money as possible. They are kept in improperly ventilated stables, the belief being that the warmer a stable is kept the greater will be the quantity of milk given, and crowded with brewer's grain, distillery swill, or any form of nastiness reputed to be galactagogue. Often they remain in these places for years, and their hoofs grow to such an extent that locomotion becomes impossible. That these conditions can of themselves excite tuberculosis is not asserted, but the teachings of human pathology are too clear to leave any doubt that they must render the animals extremely liable to be affected with any disease to which they are susceptible. The brisk competition among the breeders of "fancy" stock to produce heavy yielders of milk and butter has led to very close in-breeding, and it is well known that among their herds a large number of tuberculous animals is found. That beeves are not so liable to become tuberculous is probably because they are slaughtered at an earlier age and are never, except those which are fattened at distilleries, subjected to such unfavorable conditions as cows. It is also possible that their less intimate associations with man account for this immunity.

There is yet no evidence that the milk from tuberculous cows, unless where there were lesions of the udders, has caused the disease in man, but the possibility of this is regarded as being great, and as a result the use of such milk has been prohibited by several boards of health. If such milk is condemned, the prohibition should be extended to other dairy products. The possibility of oleomargarine being infectious has been suggested. If it ever becomes established that the flesh of tuberculous animals is unfit for food, this product would certainly be shown to be highly dangerous, as it is made largely from the peritoneal fat, a tissue in which tubercular lesions are commoner than in any other part of the body except the lungs. It is well known that Hebrews are very free from tuberculosis; may not this be due to the fact that great care is exercised by them in the inspection of meat? This examination is confined to the inspection of the lungs, and in all cases where they cannot be fully inflated or where there are adhesions of the pleura to the chest-walls the animal is rejected. A question as to the tuberculosis of fowls which would be of interest to investigators is that of whether a tubercular hen would lay eggs containing the *Bacillis tuberculosis*. That this is possible is shown by the fact that fœtal tuberculosis is not unknown.

Many other means of infection might be suggested, but we think that enough has been advanced to show the necessity of active interference by the proper authorities. The sanitary conditions and surroundings of cow stables should be improved, the use of grains, swills, etc., prohibited, and a pure water supply insisted upon. All tuberculous animals should be killed and all portions of them destroyed, preferably by fire. These latter measures have resulted in preventing the spread of pleuro-pneumonia, a highly contagious disease, and will probably at no distant day suppress it entirely. Local legislation would probably be of little use, as the laws, if they could be enacted in the different states, would vary so greatly as to prevent any active co-operation. The federal government should take hold of this matter, as was done in the case of pleuro-pneumonia.—*New York Medical Journal.*

HAINES (W. D.) ON THE TREATMENT OF GONORRHŒA IN THE FEMALE.—Seventeen cases—of which five were primary, two in a second attack, six in a third, and the remainder those of patients who had so frequently been affected that they could not remember the number of attacks—were subjected to the following treatment: The vagina was first cleansed by means of a copious douche of a strongly alkaline solution at a temperature of 43° C. to 46° C., with a view of removing as much of the vaginal epithelium as possible, and of relieving hyperæthesia of the parts. Then, by means of a Ferguson's speculum, a cotton tampon saturated with boro-glyceride was placed in contact with the cervix, and the vagina was entirely filled with crystals of boric acid, the speculum being gradually withdrawn as this is done. Excoriations about the vulva are to be treated by a dressing of lint soaked in boro-glyceride, and a T bandage applied. The dressing was left for thirty-six hours, then removed, a douche of solution of bichloried of mercury (1 to 1,000) administered, and the boric acid dressing again applied after eight or ten hours. The majority of the patients were cured after four applications, and in all the cases the discharge disappeared in from nine to fifteen days. Treatment in all was adopted in from four to twenty-four hours after the appearance of the discharge. —*Cincin. Lancet-Clinic, Oct. 27, 1888.* (*The Med. Analectic.*)

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TREATMENT OF WRY-NECK BY OPEN INCISION—WITH PRESENTATION OF A CASE.*

By J. E. SUMMERS, JR., M. D., Omaha.

In this brief paper I wish to consider a method of operating for the relief of wry-neck, when either a congenital or acquired contraction or contracture of the sterno-mastoid muscle produces the deformity. Although I have once seen the sterno-mastoid muscle ruptured during birth, there was no deformity, and this is rarely noticed until some time has elapsed, perhaps months, when an increasing shortening of the muscle produces the characteristic deformity—the mastoid process is drawn down toward the shoulder and the chin is pointed in the direction of the opposite shoulder. In the milder forms, where the contraction has not become very marked, the head can be replaced in its natural position, the deformity being immediately reproduced by removing all restraint.

In old neglected cases the muscles may be shortened two inches or more, and besides the sterno-mastoid there are shortened bands of cervical fascia, (very marked in the sheath of the muscle) which will maintain the deformity even after complete division of the muscle; the skin and platysma aiding these bands of fascia in keeping up the deformity.

In very high grades of deformity, just as in club-foot, the articulating processes undergo changes, and the whole side of the head and face, which is kept drawn down to the shoulder, as a result of the interference of function and nutrition, are smaller than the corresponding parts.

Treatment—Mild cases may be treated by some one of the numerous mechanical appliances, and the head and neck should be manipulated so as to give the opposite sterno-mastoid the best of function.

Where, in order to correct the deformity, an operation is demanded, the methods of procedure should be the same as progressive surgeons are now (following the leadership of Phelps) using in club-foot, *i. e.*, a free division of every tissue tending to maintain the deformity; this division being made from without when necessary.

Our text books tell us that the operative treatment of wry-neck consists in a subcutaneous division of the sternal, and almost always also the clavicular head of the mastoid muscle. They say also that after subcutaneous division of the sternal head "a small incision may be made down to the clavicle between the two portions of the muscle, and the clavicular attachment then cut from behind forwards with a delicate probe-pointed tenotome, which is cautiously insinuated between the muscle and the bone."

Other slight modifications of this subcutaneous method of operation are recommended, but they are all dangerous; the operator is working in the dark in the immediate neighborhood of large blood vessels. Ashhurst says, "the operation for wry-neck is one of much delicacy, and not free from risk, the principal danger being from the possibility of wounding the external or internal jugular vein, or the carotid artery; that this risk is not merely imaginary is shown by the fact that. in more than one case, the operation has been followed by fatal hemorrhage."

The section of the muscle is more or less incomplete, and as I have stated above, in cases of marked deformity, division of the sterno-mastoid muscle alone will not correct it, as it is still maintained by the skin, platysma and bands of cervical fascia.

Experience having taught me that club-foot, where the deformity was such as to seem to call for the removal of a wedge of bone from the foot, could be almost, if not entirely remedied by Phelps' operation, viz:

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*Read before the Medical Society of the Missouri Valley, Mar. 21, 1889.

free division of skin, tendons, muscles, ligaments, nerves and blood-vessels, the resulting gap being replaced by an organized blood-clot, the incision commencing just in front of the inner malleolus and extending downwards one or two inches or more. Failure to get a good result in a bad case of club-foot, where, instead of making my incision as Phelps, I made it in the long axis of the foot and then divided the restraining tendons, muscles, etc., at a right angle to my cutaneous incision, determined my operation in the case I present to you to-day.

This boy, 16 years of age, is a remarkable example, as you will see, of asymmetry of the sides of the face and head. The lesion was acquired, and resulted from an attack of scarlet fever when 2 years old, and involves the right side.

I operated on this boy in the Clarkson Memorial Hospital, January 16th, 1889. After an attempted sub-cutaneous division of both heads of the sterno-mastoid muscle, and finding good reduction of the deformity impossible, I made an incision just above the right clavicle extending from its middle to the sterno-clavicular articulation on the left side, and having everything in clear view, divided all resisting tissues until the head could be brought into good position (exaggerated). No vessels of importance were divided. The large gap was dressed antiseptically, and the head fixed in the exaggerated position by felt passing from each shoulder over the top of the head and secured by bandages. This dressing having slipped after a few days, was replaced, as far as a retentive apparatus for the head was concerned, by a band fastened around the head to which was attached at a point just above the mastoid process, a rubber tubing, the other end of which was fastened to a padded collar encircling the arm at the axilla. The wound healed with very little suppuration, and the change wrought is remarkable. The boy can, as you see, move his head in all directions, where, before, in order to look to the right it was necessary to turn the body first; he is exercising daily in a gymnasium, and the already good result will be improved as the long neglected muscles are developed. The asymmetry will probably improve somewhat, but not much.

While operating on this boy, Dr. Bridges, who was assisting, informed me that some English surgeon had just advocated in the *Lancet*, the operation I was doing, and I saw afterwards many notices of this in our own journals, headed mostly, "A New Operation for Torticollis."

This "new operation" of Dr. Levrat consists of an incision two centimetres, (less than one inch), long, over the sternal head of the sterno-mastoid muscle, which after exposure he divides upon a director. "He then divides any tissue that may bind down the muscle at that spot, sutures the wound, and dresses it antiseptically with iodoform and gauze. The head is restrained in the corrected position by an ordinary elastic tension apparatus. For very simple cases this is an improvement on any subcutaneous operation, but in any but the simple cases, it too is wrong in principle, and in practice must be more or less a failure.

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DISCUSSION

ON "TREATMENT OF WRY-NECK BY OPEN INCISION," WITH PRESENTATION OF A CASE, BY J. E. SUMMERS, JR., M. D., Omaha.

Dr. Bridges—I am very sorry that several of the prominent Omaha physicians are not here to-day to see this case, because I have understood from this boy's mother that for the past six or eight years he has been under the observation of different men who have always advised him not to have anything done, and in consequence you see a failure of development in the right side of the head, which might have been avoided had an operation been performed a number of years ago. It was only after looking at him, and talking to her about it and urging her to have it done, for probably two months, that we finally got his mother to consent to the operation, because others had told her not to have it done.

Dr. A. F. Jonas—I think the most important point in connection with this class of cases is the etiology, and I am sorry Dr. Summers did not touch upon this point. I believe the large majority of these cases are of congenital origin. Prof. Heuter, in a large number of instances, states that he has found only two cases which he could not attribute directly to congenital origin. The majority of these cases are caused during the time of labor, in breach presentations, and most generally a laceration of the sterno-mastoid muscle takes place when the body of the child is thrown up over the abdomen of the mother. The muscles become lacerated and torn, consequently there is a great deal of hemmorrhage between the lacerated ends of the muscle, and subsequent development of the connective tissue which becomes contracted, forming cicatricial tissue, interferes with a proper development of the muscle. The deformity will not be noticed when the child is young, but as it grows older the opposite muscle develops, while the injured side is retarded in its growth.

We also sometimes see a rupture of this muscle produced by forceps when a great deal of force has been used in pulling the head of the child in one particular direction.

This case presents a difference in the development of the two sides of the face and head. Broca was the first to call attention to the fact that the carotid on the injured side is serpentine and tortuous, in this way preventing the free and unimpeded flow of blood to that side of the face, and also claims that the brain on that side is much retarded in its development. But cases have been noticed which regain their symmetry after an operation has been performed. Of course the younger the subject the better the prospects are for complete recovery. This individual has, perhaps, passed beyond that age when we can expect the face to become developed to its normal condition on both sides.

So far as an operation is concerned, I am heartily in favor of an open operation. I do not believe at present we can operate sub-cutaneously upon those cases with absolute certainty, for we frequently cut structures we do not wish to, particularly in the neck. As to the direction of the incision, I would prefer the incision to to run diagonally to the fibres of the muscles. In the first place, in a traverse incision we cannot prevent the wound from gaping, and in a diagonal incision we have no gaping hardly. In a case upon which I operated a diagonal incision was made across the muscles instead of a transverse, because there is always danger of contraction of the muscle, and the place will fill up with blood, and we cannot prevent contraction of the muscle, so I made the incision diagonally that the ends of the muscles might still be in apposition. In regard to the means of retaining the head in position, I like the method which is followed out in the surgical wards at Halle. An extension is placed on the head with a collar around the neck, and a weight and pulley from the bed to hold the head in proper position. We find that many patients with this apparatus will elevate the shoulder on the operated side, to bring the shoulder in the same relation to the head which it occupied before the operation; to obviate this, we may apply a weight and pulley to the arm, so as to draw it down to proper position.

Dr. J. E. Summers, Jr.—The remarks of the last speaker about incisions made as he suggests, *i. e.*, superficially, in the long axis of the muscle, dividing the muscle itself at an angle of about 45°, is exactly the proceedure I adopted in bad cases of club-foot, and failed, until I tried Phelps' method of free incision, when the result was so much better that the reason for it was obvious. In bad cases of wry neck, of long standing, no other method of operation than the free division of the skin, platysma, fibrous bands and muscles will give the desired result. The gaping of the wound is what we want; it shows we have accomplished something; new tissues are formed to fill the gap, and although we have more scar, we have less deformity.

A CASE OF LAPAROTOMY.

By D. R. Pelton, M. D., Wahoo, Neb.

I wish to report a case which I operated upon for an ovarian tumor, and which had many features of interest to me, and I doubt not will also have to our friends in the profession.

The lady to whom I refer was aged 38, of medium size; was of extreme nervous temperament, and soon after mature age was affected with hysteria.

About the age of 30 she was examined by a physician in the east, who diagnosed an enlargement in the right ovarian region. Four years previous to that time she received injuries from a fall, after which she had quite severe uterine hemorrhage.

After the enlargement was discovered by a physician about eight years ago, it increased in size very gradually and with but little more discomfort than in her former life. She was treated by several physicians for female weakness and uterine misplacement. About the age of 35 she married. After being married a short time she became pregnant and almost simultaneous with the development of the gravid uterus the tumor began to enlarge, but of a soft nature and so blended with the enlargement of the uterus that her family physician, where she then resided, did not detect the separate growth. After several months had passed, the lady called the attention of her physician to her unnatural enlargement, which he attributed to twin pregnancy.

Thus the case progressed with much discomfort until about the eighth month, when the enlargement and pressure became so great that premature labor set in, and she was delivered of a child; though small it lived and became strong.

At the delivery of the child and placenta, the enlargement did not materially reduce, but as the patient stated, she seemed nearly as large as before the birth. Soon after this the abdomen became so enlarged and painful that her physician deemed it necessary for an operation to be performed for what he supposed was abdominal dropsy, and relieved her of several quarts of thick gelatinous matter, using a small trochar for the operation. The cavity was again soon filled and demanded another operation, and still another, until in nine months from the time or her confinement she had been tapped five times.

Her case by this time became so critical that no hope was entertained for her life more than a few days. Her friends related to me her history and condition, to which I answered that it was probably an ovarian tumor, and that it was of such a character that it very likely would not redound much to the glory of the surgeon who operated for it; and yet advised that an operation for removal was the only chance of life.

Accordingly the case was sent to me soon after the relief from the last tapping, which was about two weeks from that time. I made an examination the same day of her arrival and found the abdomen enormously enlarged, measuring 57 inches around the waist. The patient wore that anxious ovarian expression of countenance characteristic of such troubles, with very difficult respiration from distention and pressure on the diaphram and lungs.

On examination I found as I believed the whole of the lower abdomen and far above the umbilicus distended with a cystic tumor. Along the border of the stomach and liver lay a hard, immovable mass, which was seemingly a portion of the upper wall of the tumor. Although but two weeks since being tapped the abdominal wall was under great tension, and had dislocated the ensiform appendix of the sternum.

By the urgent request of herself and friends we determined to operate, knowing there must be some adhesions, but to what extent could not be ascertained. Her temperature was now rising, registering on the day of operation 102, and pulse 120. I used the necessary precautions of antiseptic surgery, such as having the room cleansed and sprayed with carbolic acid and the instruments treated with hot carbolized water, etc. She had been put on two grain doses of quinine every four hours two days previous to the operation, her pulse being weak. The pubic region was shaven and treated with a $\frac{1}{2000}$ solution of bichloride. I operated on her November 24, 1888, assisted by Drs. Morton, Noidstrom, Soul and Parmer. Many thanks for their interest in the case, and Dr. Morton's assistance after the operation also. The patient was moved to the operating table and chloroformed, as we preferred that to ether. The abdomen was then again rubbed with the solution of bi chloride. I made my incision midway of the umbilicus and pubic bone in the median line, carrying it continuously through the thinned tissue down to the peritoneum, there finding the tumor completely adherent to the walls of the abdomen in the locality where the several tappings had been performed. I then extended the incision up some three inches above the umbilicus and down as close to the pubic bone as advisable. The cyst wall being thinned and weakened by distension, and not being able to stand the pressure caused by vomiting it gave way at the point of last tapping, upon which I introduced a large trochar and canula, drawing away as much as possible of the contents of a large cyst, which was thick and gluey with opaque flakes.

Finding the tumor adherent to the liver and other organs, *not with simple bands* of adhesion, but with whole surface completely united, as the surface of a wound would unite with plastic matter; finding it impossible to remove the shell of the tumor entire, I made a long incision into it and introduced my hand and broke up the contents and removed it, which consisted of five or six daughter cysts, whose walls I tore open in part; some were thick as heavy leather and had to be cut. There were also large, pearly white flakes and broken down tissue, the amount filling a large wooden pail. I passed my hand inside the tumor up to the border of the liver, where it was adherent, and opened several small cysts which were in the centre of the mass, which I found on examination along the border of the liver, as before diagnosed. This hard mass proved to be a fibrous portion of the tumor, and not only was it adherent to the whole border of the liver, but also to the pyloric portion of the stomach, to the omentum, to the whole right side of the abdomen and floor of the pelvis, and think also to the bladder, only leaving a free portion on left half front of the abdominal wall, thus leaving less than one-fourth of the surface free from adhesions.

The tumor was attached principally in its early day by a broad pedicle in the right pelvis, where it first originated, involving the ovary. As the cyst developed, stimulated by the now active circulation from the pregnant state, it lifted the already existing fibroid high in the abdominal cavity, the pressure causing inflammation and adhesion to the liver and other organs. I inverted the sack and found small masses of red, gelatinous substance, with their membranous covering adhering to the walls like barnacles, *which were infant cysts.*

Not desiring to preserve the tumor and bury my patient (which neglect or mistake I have known) but to preserve my *patient* for exhibition, I therefore changed my plan of operating, for dissection of such extensive adhesions to so many important and vital organs would only result in death, and that immediately, so I broke up as much of the fibrous tumor which was connected with the cyst as was possible, and washed out the cavity with carbolic acid water, then closed the abdomen with interrupted sutures; also uniting by the sutures the cyst walls to the abdominal incision to effectually prevent any of the contents entering the abdominal cavity after being closed. I then inserted two carbolized drainage tubes, one above the umbilicus and one in the most depending portion near the pubis; bringing the entire incision together, tied the suture, and dressed with iodoform, absorbent cotton, adhesive straps, flannel binder, etc. I then moved the patient into a warm bed and applied bottles of hot water. The patient rallied from the operation and seemed in a fair condition.

She had been under the influence of chloroform about one hour and a half. As she came down under the influence of it her pulse became stronger. Her vomiting was not caused by the chloroform, for she had been vomiting at times during the forepart of the day before the operation was performed.

The next day after the operation her temperature was 101½. The second day it registered 102. This I think was the highest it registered after the operation.

Her greatest difficulty was the almost incessant vomiting, which could only be partly controlled. Its persistance, I believe, was caused principally by the attachment of the tumor to the stomach, and so irritating the gastric nerve. Among the many remedies used was cocaine, which seemed to have some effect in quieting the stomach.

After the expiration of four days I removed the dressings, as they had become soiled by the discharge through the drainage tube, and found the entire incision united by first intention, except the places occupied by these tubes.

In about five or six days I commenced injecting the sack with tr. iodine, half strength, then washing it out immediately after with warm water. In about ten days I had to remove the upper drainage tube, as the tube was crowded out by the fibrous mass and would not be of much benefit longer.

The discharge of gelatinous matter was at first profuse, but with the steady use of the iodine, gradually increased to full strength, changed the discharge to more the nature of pus. The iodine was used every other day, and at least twice a week until the discharge was more a laudable pus. Aside from this it was washed with carbolized water. She was placed as soon as possible upon Fowler's Arsenic Solution and tonics. With this treatment the cyst wall contracted, and the discharge lessened. Even the fibrous portion became less firm, until the cavity would not retain more than one ounce without discharging.

On January 16, 1889, I allowed her to return to her home, which was a distance of 400 miles by cars, with full directions for the care and treatment. After the operation and when she returned to her home, her measurement around the waist was twenty-four inches, which allowed thirty-two inches reduction in measurement after removal of the tumor.

Among the many points of interest was the rapid development of the tumor after pregnancy; the high temperature and weak pulse at the time of the operation; the extensive adhesions precluding all separation of the tumor, and the performing the operation during a fresh attack of peritonitis; also the favorable progress of the case, with contraction of the sack and a tendency to reduction of the fibrous portion after the operation.

The patient after arriving at her distant home passed into the hands of her home physician, unfortunately not allowing me opportunity to give a full report of the case and the subsequent changes. The patient lived four months after the operation, and died of some intercurrent trouble, the nature of which I have not been able to ascertain.

In closing this report I desire to say—That we should take warning against several tappings, if done at all. Second—That an early operation is very desirable for success in restoring health. Third—That in inflammation from pressure immediate interference is demanded if the life of your patient is expected to be saved.

VULVO-VAGINITIS IN CHILDREN.

By Andrew F. Currier, M. D., New York.

The conformation of the female external genitals in childhood suggests the greater importance of the urinary as compared with the genital apparatus during that period. It also means increased susceptibility to infection on account of exposure of these organs, in addition to the readiness with which infection is received in developing tissues. The infectious element may be communicated either to the vulva or the vagina, and the resulting inflammation extend in either direction. It rarely occurs that the inflammation extends to the peritonæum, differing in this respect from the similar disease in adults. Vulvo-vaginitis is believed by the author to be one of the principal causes which produce so many deformed and undeveloped uteri, with their accompanying dysmenorrhœa and sterility. If this is a fact it demonstrates the great importance of treating this disease in its early history, and not ignoring it as mothers and family physicians are too prone to do. The disease is, in the majority of cases, due to infection, this term being used in its broadest sense, but it may also arise from traumatism of various kinds and degrees, or the influence of parasites other than the parasitic micro-organisms of infectious disease. The disease may be congenital, and would probably be more frequently of congenital origin were not breech presentations far less common than vertex. It is believed, however, that infection may also occur with vertex presentations. The congenital form may also be associated with such exanthemata as measles and scarlet fever, which have developed during fœtal life. Epidemics of the disease have been studied in hospital practice by Von Dusch, Tischendorf, Suchard, Sarazin, De Amicis, Cseri, Bouchut and Atkinson. The traumatic variety may be due to self-inflicted injury or irritation, to falls, blows and assaults. The severe penalty which attaches to rape gives this disease an importance, in a medico-legal sense, which is possessed by no other disease of childhood. The variety which is due to the irritation caused by intestinal worms may, in some cases, be due to migration of the parasites into the vagina, with deposition of their ova upon the mucous membrane and subsequent development. Such a theory seems, however, conjectural. The disease may be classified into (1) the simple catarrhal variety, (2) the gonorrhœal, (3) the phlegmonous, (4) the diphtheritic.

The simple catarrhal variety is of very common occurrence at all ages of childhood, but is most frequently seen in the homes of the poor and in hospitals. Its most evident symptom is a white or colorless discharge, which dries upon the skin contiguous to the genitals and causes intense pruritus. The irritation which is produced may cause the development of the phlegmonous form. It may be due to want of cleanliness, or be a result of a constitutional disease such as syphilis, rhachitis, or scrofula, or it may be associated with an acute disease like measles or scarlet fever. Its duration depends partly upon its cause, and partly upon the character of the treatment which is adopted for its relief.

Gonorrhœal vulvo-vaginitis is due to the gonococcus of Neisser, the same as the similar disease in adults, but it is not always possible to find these microbes. It has the same characteristic purulent discharge, the same dark red appearance of the mucous membrane, the same exquisite sensitiveness in the acute stage, and a history of direct or indirect contact with some one who has suffered from the same disease. It is readily transmitted in hospitals by attendants, and by want of care in the use of furniture and bedding. It may be caused by sleeping with an infected parent or brother or sister, or by assault and rape.

Phlegmonous vulvo-vaginitis is usually due to traumatism. The gangrenous stage may follow typhoid fever, diphtheria, measles, scarlet fever and small-pox. Like *noma*, such a condition would be most likely to affect poorly-nourished and illy-cared for children. The phlegmonous variety may co-exist with the catarrhal. It follows the course of phlegmonous inflammations in general.

Diphtheritic vulvo-vaginitis is not limited to diphtheria, though it may be best considered in connection with that disease. It may be developed with any morbid condition in which the blood contains an excess of fibrinogen or fibrinogenous material. It means sepsis, necessarily results in gangrene to a greater or less extent, and often leads to a fatal issue.

The treatment in all these varieties resolves itself into antisepsis and cleanliness. The general condition is first to be improved whether there be a co-existing acute or chronic disease, and a choice must be made between the vegetable and mineral tonics which should be given as circumstances indicate. A sojourn by the sea shore with sea-baths would be of great benefit. The home surroundings must be made as clean and wholesome as possible. Locally little can be done during the acute stage, but subsequently intra-vaginal injections of boiled water, or boiled water containing any suitable antiseptic, the temperature being 95° to 100° F., should be carefully and thoroughly given twice daily. Preparatory to these injections a pad of absorbent cotton moistened with a 5 per cent. solution of cocaine may be placed for five minutes against the external genitals. In the catarrhal and gonorrhœal varieties suitable quantities of a 2 per cent. solution of nitrate of silver should be injected into the vagina and applied to the external genitals, and during the intervals of other treatment a pad of absorbent cotton, moistened with a mixture of bismuth and glycerine (1.8) should be secured by a "T" bandage against the external genitals. Pus should be evacuated and gangrenous tissue removed, and for an antiseptic dressing in any of the varieties it is believed that bismuth, or bismuth and glycerine, will be entirely satisfactory.

AMPUTATION OF THE CERVIX UTERI FOR CANCER.

Verneuil read a very interesting paper before the Paris Surgical Society in October (*Annals of Gynecology*, January, 1889), showing the results of all his operations up to date. Previous to 1884 he had operated upon seventeen patients, each of whom survived an average of twenty-three months after the operation. During the four years subsequent to that period he had had five cases, each patient living an average of twenty-nine months. In nine of these twenty-two cases there was a recurrence of the cancer in the cervix, while in twelve the cervix remained absolutely free from disease, although one patient was under observation for seven years.

The writer lays especial stress upon what he terms "ganglionic recurrence," or subsequent development of the disease in the peri-uterine tissues, which is "beyond the reach of the surgeon." He had two deaths, one from peritonitis, due to accidental opening of the peritoneal cavity before the days of antiseptic surgery, and the other from septicæmia, resulting from the leaving in the vagina of a tampon that had been introduced without his knowledge. In one instance there was an error in diagnosis, the condition not being malignant. Apropos of this case, he cites one in which he examined a uterus that had been removed per vaginam as cancerous, when it was only the seat of chronic metritis.

Verneuil employs the "linear ecraseur," splitting the cervix first. He thinks that partial hysterectomy by this method is such a simple and bloodless operation, the mortality of which is *nil*, that it should be preferred to total extirpation.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.

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All business correspondence must be addressed to

H. J. PENFOLD, PUBLISHER,
1110 Farnam St., Omaha, Neb.

OMAHA, JUNE, 1889.

THE BISHOP CLARKSON MEMORIAL HOSPITAL.

Through the generosity of Mrs. Ogden, of New York, a large, well lighted and convenient operating room has been built at the Bishop Clarkson Memorial Hospital, Omaha. Heretofore the many operations performed in this institution have been done in whatever rooms the patients have happened to occupy, often at great inconvenience to the operator and assistants, and frequently it has been impossible for visitors to witness these operations for want of space. When neither the patient objects nor the character of the particular operation requires extraordinary precautions, it is to the interest of all that professional men other than those taking part in operations should witness them. It stimulates the operator to do better work as he knows his methods and mistakes would be open to criticism, and it affords others an opportunity to learn.

Although the Bishop Clarkson Memorial Hospital was originally intended for children there are two wards for women, besides a number of private rooms which can be occupied by either men or women.

A PUBLIC MEDICAL LIBRARY.

The creation of a public medical library in the city of Omaha is a progressive movement which will be appreciated by the profession of the city generally, and especially by many of the younger physicians whose means will not permit of the purchase of expensive works of reference or treatises on specialties. Before the recent purchase there were a number of medical works already in the library, but not enough to attract the medical profession. A glance at the list of books (found elsewhere in this issue) recently ordered, shows that they are of the best, and we have been informed that if physicians use these books, others of like character will be purchased from time to time. Most of the books will belong to the circulating department of the library.

Four leading medical journals, published in Berlin, London, New York and Omaha, can be read in the library rooms.

THE IOWA STATE MEDICAL SOCIETY.

The meeting of the State Medical Society at Keokuk, May 15th, 16th and 17th, was one of the best and most enjoyable in the history of that society. The citizens of that beautiful city were only deterred through lack of time from turning the whole city over to make the stay of the visiting physicians one continuous round of enjoyment. The papers were of a very high order of merit, and the discussions equally brilliant and scholarly.

The president, Dr. Macrae, of Council Bluffs, won the universal plaudit of being a most excellent presiding officer, and expediting the business of the meeting as it had never been done before in that body. The following officers were elected for the coming year:

President, J. M. Emmert, Atlantic.
First Vice-Prest., Geo. F. Jenkins, Keokuk.
Second Vice-Prest., E. F. Clapp, Iowa City.
Secretary, Chas. F. Darnell, West Union.
Treasurer, Geo. R. Skinner, Cedar Rapids.

Meeting, third Wednesday in May, 1890, at Des Moines, Iowa.

SPECIAL attention is called to the circular from the Department of the Interior, census office, in regard to vital statistics. The time for taking the eleventh census is upon us, and we hope all physicians will co-operate heartily with the superintendent in an effort to secure as reliable statistics as possible.

THE next annual meeting of the American Medical Association will be held in Newport, Rhode Island, commencing June 25th, 1889. Usually Nebraska is well represented at these meetings. So far we have heard of only two who expect to attend, Dr. Moore, of Omaha, and Dr. Whitten, of Nebraska City.

THE MEETING AT KEARNEY.

The present membership of the Nebraska State Medical Society is very nearly 300. Of this number only about sixty-five were present at Kearney. Considering the distance many had to travel, this may be considered a fair representation. In fact, it is only when the Society meets in one of the large cities that the members turn out in larger numbers.

The proceedings will be found in this number of the CLINIC. The various papers referred to the committee on publication will also appear in the CLINIC as rapidly as possible. At the end of the year each member will receive a bound copy of the proceedings without charge—this, in addition to the CLINIC, monthly. Persons who have preserved the proceedings of last year, can have them bound with those of this year, on the same terms. We thank our friends who so generously aided in bringing about this arrangement, and we hope to show that their confidence was not misplaced.

In the matter of work done, it was a common remark that it was better than usual. In fact, some said it was the best meeting we ever had.

It is to be regretted that another failure, as last year, occurred in securing reports of the discussions. A shorthand writer was present the first day, but after that he disappeared from the scene. Often the discussions on papers read, are the most valuable of all the matter brought before the members, and while those who are present get the benefit, the absent ones do not, if they are not printed. Perhaps that is their just punishment for not being present.

We noticed that harmony and good feeling prevailed throughout. There were no wrangles, such as we have seen in times past, to disgrace the participants, and endanger the existence of the Society, and we trust such will be the history of all future meetings.

Many of us will miss the familiar epistles from "Quality Hill" spurring us to duty, or chiding us for neglect. After thirteen years of faithful service, Dr. Mansfelde retires from the secretaryship, because the duties of the office have become too onerous for his time and strength. The Society very properly tendered him a vote of thanks for his valuable services, but we realize that that is a very poor compensation for what he has done. None but those who are familiar with the facts, can realize how much any organization owes to its secretary for working out the ends of its existence. We hope the mantle of his efficiency may have fallen upon the shoulders of his successor.

Of the social features of the occasion we can only briefly say that they were up to the mark always attained by the people of Kearney. The "drive" Thursday afternoon was a delightful method of recreation for the members, displaying to their wondering gaze broad avenues, elegant drives, handsome parks, placid lakes, palatial residences, and an unrivaled water power, already utilized in driving machinery and lighting the city. The banquet Thursday night was a sumptuous spread, fit for royal guests.

We are glad to be able to announce to our readers that an arrangement has been made with the Iowa State Medical Society, by which we have the exclusive right to publish the proceedings of the Society, lately held at Keokuk. The work will commence as soon as we are through with Nebraska. While this will add to the labors of the editors, we are willing to endure them, believing that we can be of some service to our brethren on the other side of the "Big Muddy". By coming into closer relations may not a generous rivalry between the two states be engendered that will benefit both?

SOUTHERN Nebraska has a District Medical Society, composed of the counties of Gage, Jefferson, Thayer, Nuckals and Saline. The next meeting will be held in Fairbury, the 26th of June. We hope to hear from them further through THE CLINIC.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,
208 So. Fifteenth Street, Omaha, Neb.

RAILWAY SURGEONS' SOCIETY OF NEBRASKA.

Annual Meeting, May 22, 1889.

The Society was called to order by Vice-President Dr. D. C. Bryant, at Masonic hall, Kearney, Neb.

By Dr. Hall: That the amendment to constitution lying over from last meeting be adopted. Carried. "This Society shall meet once a year on the first Tuesday of October, in Omaha and Lincoln alternately."

By Dr. Hall: As per resolution offered by Dr. Gifford at the preceding meeting, that the first meeting be held in the city of Omaha, Tuesday, October 1st, 1889.

By Dr. Mansfelde: That the members appointed at last meeting hold over, and be required, by a written notice from the Secretary, to read papers at the annual meeting, and that Dr. Jonas be added to the list.

The following members constitute the committee required to read papers at the meeting at Omaha, Tuesday, October 1st:

Drs. Hoover, Kearney; Hall, Weeping Water; Lee, Omaha; Hobbs, Elmwood; Hildreth, Lyons; Miles, Schuyler; New Kirk, Falls City; Burchard, Falls City; Donalson, North Platte; Gifford, Omaha; Conrad, Crete; Johnston, Fairmount; Mansfelde, Ashland; Gafford, Wymore, and Jonas, Omaha.

The following were elected officers for the next year:

Dr. D. C. Bryant, Omaha, president.

Dr. M. A. Hoover, Kearney, first vice-president.

Dr. J. E. Hall, Weeping Water, second vice-president.

Dr. A. S. v Mansfelde, Ashland, secretary, reelected.

Dr. G. H Peebles, Lincoln, treasurer, reelected.

By Dr. Hoover: To lay over as a constitutional amendment, that the office of the corresponding secretary be abolished and that the secretary assume the duties of that office.

Adjourned to meet in annual session at Omaha, Tuesday, October 1st, 1889.

A. S. v Mansfelde,
"Quality Hill" Secretary.
Ashland, Neb.

FREE MEDICAL LIBRARY.

The following medical books, selected with great care by J. E. Summers, Jr., M. D., by request of the Library Committee, have been purchased by the Omaha Public Library for the benefit of the profession and others desiring information on medical subjects. These, added to those already in the library, make the number about 250.

Ashhurst, International Encyclopædia of Surgery, second edition, 6 vols.
Bartholow, Practice of Medicine.
Bramwell, Intra-Cranial Tumors.
Broadbent, On the Pulse.
Browne, The Throat, Nose and Ear.
Bryant, Hunterian Lectures.
Butlin, Operative Surgery of Malignant Disease.
Cooper, The Rectum.
Crookshank, Bacteriology.
Cyclopædia of Obstetrics and Gynæcology, 12 vols.
DaCosta, Medical Diagnosis.
Doty, Manual of Instruction in the Principles of Prompt Aid to the Injured.
Dalton, Circulation of the Blood.
Flint, Clinical Medicine.
Flint, Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart.
Flint, Practical Treatise on the Physical Exploration of the Chest.
Foster, Physiology.
Garretson, Oral Surgery.
Gibney, Orthopædic Surgery.
Goodell, Lessons in Gynaecology.
Green, Pathology and Morbid Anatomy.
Harrisons, Disorders of the Urinary Organs.
Hirst, American System of Obstetrics, 2 vols.
Hutchinson, Syphillis.
Jackson, Diseases of the Hair and Scalp.
Jacobi, Hysteria, Brain Tumor, etc.
Jacobi, Intestinal Diseases of Infancy and Childhood.
Jones, Diseases of the Bones.
Litch, American System of Dentistry, 3 vols.
Lucas, Diseases of the Urethra.
Mann, American System of Gynæcology, 2 vols.
Marsh, The Joints.
Morris, Surgical Diseases of the Kidneys.
New York Academy of Medicine, Transactions, second series, 5 vols.
Ollier, Traite des Resections et de Operationes Conservatrices Q'on Peut Pratiques sur le Systeme Osseaux.
Peaslee, Ovarian Tumors.
Pepper, Surgical Pathology.
Ranney, Nervous Diseases.
Roberts, Urinary Diseases.
Roberts and Morton, Modern Surgery.
Smith (Steven), Operative Surgery.
Savage, Insanity and Allied Neurosis.
Sayre, Orthopædic Surgery.
Schreiber, Massage.

Seiler, The Throat.
Skenr. Diseases of Women.
Slade, Diphtheria.
Smith (Greig), Abdominal Surgery.
Spitzha, Insanity, Its Classification, Etc.
Tait, Abdominal Surgery and Diseases of Women.
Taylor, Jurisprudence.
Taylor, Atlas of Skin Diseases.
Taylor, Venereal Diseases.
Treves, Intestinal Obstruction.
Treves, Manual of Surgery, 3 vols.
Van Buren and Keyes, Syphilis and Genito-Urinary Diseases.
Watson, Amputation of Extremities.
Waxham, Intubation of the Larynx.
Wells, Ovarian and Uterine Tumors, Their Diagnosis and Treatment.
Winckel, Diseases of Women.
Wood, Reference Hand-Book of Medical Science, 8 vols.
Wyeth, Text-Book of Surgery.

PERIODICALS.

Medical Record.
British Medical Journal.
Archieves fur Klinische Chirurgie.
Omaha Clinic.

BOOKS NOT IN THE CATALOGUE.

Atlee, Ovarian Tumors.
Ball, Rectum and Anus.
Bartholow, Practical Treatise on Materia-Medica and Therapeutics.
Beard and Rockwell, Medical Electricity.
Bryant, Operative Surgery.
Burt, Exploration of the Chest.
Butlin, Diseases of the Tongue.
Carter and Frost, Ophthalmic Surgery.
Emmet, Principles and Practice of Gynæcology.
Fagge, Practice of Medicine, 2 vols.
Flint, Ausculation and Percussion.
Flint, Practice of Medicine.
Gerster, Aseptic and Antiseptic Surgery.
Gowers, Diseases of the Nervous System.
Gray, Anatomy, eleventh edition, colored plates.
Gross, System of Surgery, 2 vols.
Hamilton, Fractures and Dislocations.
Hammond, Treatise on Insanity in its Medical Relations.
Hammond, Treatise on the Diseases of the Nervous System.
Howe, Emergencies and How to Treat Them.
Hyde, Diseases of the Skin.
Landois Sterling, Physiology.
Juler, Ophthalmic Science and Practice.
Loomis, Physical Diagnosis.
Loomis, Practice of Medicine.
Lusk, Science and Art of Midwifery.
Mackenzie, The Fatal Illness of Frederick the Noble.
Mitchell on the Nerves.
Payne, General Pathology.
Pepper, System of Practical Medicine, 6 vols.
Pickering, Fractures and Dislocations.
Ross, Nervous Diseases.
Schultze, Pathology and Treatment of Displacement of the Uterus
Scovil, In the Sick Room.
Senn, Experimental Surgery.
Smith, Diseases of Children.
Taylor, Treatise on Poisons.
Wood, Treatise on Therapeutics, Comprising Materia-Medica and Toxicology.

PUBLIC HYGIENE.

Chadwick, The Health of Nations.
Corfield, Sewerage and Sewage Utilization.
Gerhard, House Drainage and Sanitary Plumbing.
Gerhard, Notes Embodying Recent Practice in the Sanitary Drainage of Buildings, with Memoranda on the Cost of Plumbing Work.
Nichols, Water Supply.
Richardson, The Health of Nations; a Review of the Works of Edward Chadwick.
Tidy, the Treatment of Sewage.
Varona, Sewer Gases.
Walker, Health Lessons.
Waring, The Sanitary Drainage of Houses and Towns.

Reviews.

PAMPHLETS AND JOURNALS.

Kansas Medical Journal, Vol. 1, No. 1. Published monthly at Topeka, Kansas, by an editorial committee consisting of W. L. Schenck, M. D., Osage City, J. E. Minney, M. D., and S. G. Stewart, M. D., both of Topeka; $2.00 per annum.

This new candidate for recognition comes to us with thirty-two pages of original articles, editorials, society proceedings, and miscellany. The size and general make-up is much after that of The Omaha Clinic, and we congratulate the publisher on his good taste. We recognize on the editorial staff our friend of "ither days," Dr. W. L. Schenck, who says in his "bow": "There are no friends to reward or enemies to punish, but believing that the prevention and cure of disease, the preservation of health and life, and the full and harmonious development of the physical, intellectual and moral man are among the great interests of humanity * * we have established the *Kansas Medical Journal.*" Doctor, we take the open hand proferred, and wish you and your journal success.

Sewage Disposal. An address delivered before the State Sanitary Convention at Emporia, Kansas, December, 1888. By W. L.

Schenck, M. D., member of the State Board of Health.

Biniodide of Mercury: Its antiseptic use. By Eugene P. Bernardy, M. D. Reprinted from the Transactions of the Philadelphia County Medical Society, Jan. 23d, 1889.

Stomach-Washing in Infants, with Demonstration on the Living Subject. By A. Seibert, M. D. Read at a meeting of the Section on Pediatrics of the New York Academy of Medicine, November, 1888. Reprinted from the Archives of Pediatrics, April, 1889.

Frequency of Albuminuria in Healthy People. By Geo. H. Shepherd, M. D. From Proceedings of Connecticut Medical Society, 1888.

First Biennial Report, of the Superintendent of the Norfolk Hospital for the Insane, Norfolk, Nebraska, Dec. 1st, 1888; E. A. Kelly, M. D., superintendent.

Common Membranous Sore Throat. By J. Solis-Cohen, M. D., Philadelphia. Reprinted from the New York Medical Journal, March, 1889.

The Times and Register; 1725 Arch St., Philadelphia, Pa.; William F. Waugh, A.M., M. D., editor, with a large corps of able collaborators in America, England and France; weekly, 24 pages.

This represents a union of the *Philadelphia Medical Times*, the *Medical Register*, and the *Dietetic Gazette*. The departments of the three journals will be continued.

Ninth Annual Report, of the State Board of Health of Illinois, with an Appendix embracing Report of the State Sanitary Survey, Vital Statistics of Illinois, and Coroners' Inquests, Meteorological Tables, and Report of State Medicine in 1886.

Sixteenth Annual Report, of the Secretary of the State Board of Health of the State of Michigan, for the fiscal year ending June 30th, 1888; Lansing.

Probably the most important article in the report is a paper by Dr. Baker in which reports of sickness and meteorological conditions are so grouped as to show the relation of certain meteorological conditions to diseases of the lungs and air passages. This paper not only presents evidence concerning these diseases in Michigan, but also in the United States armies, in the native troups of India, and in London, England, for a period of thirty years. These facts, gathered over wide areas, seem to show that influenza, tonsilitis, bronchitis and pneumonia have one controlling cause, viz., the inhalation of cold dry air. The paper explains the order of succession of the cold-weather diseases from a simple coryza, or common cold, to pneumonia. Tables and diagrams are also presented showing that a few of the communicable diseases, which, as a rule, gain access to the body through the air passages, are quantitatively related to the atmospheric temperature, almost invariably rising after the temperature falls and falling after the temperature rises. Dr. Baker's explanation of this is that the albuminous exudations which result from the inhalation of air colder than usual supply a place favorable for the reception and reproduction of the specific germs of these diseases.

Other articles in the report deserving special mention are a document giving rules concerning the prevention and restriction of smallpox, a report on alleged nuisances in Michigan, and especially a paper on communicable diseases in Michigan during the war. The reports compiled in this last article show that in those outbreaks of scarlet fever and diphtheria in Michigan in which isolation and disinfection (as recommended by the State board) were neglected there were four to five times as many cases and deaths as in those outbreaks where these precautions were taken. This evidence is all the stronger because it is in harmony with the facts collected during the previous year. Together, they indicate a saving during the two years of 11,180 cases and 1,685 lives by restrictive measures in these two diseases.

Proceedings and Addresses at a Sanitary Convention held at Hastings, Michigan, Dec. 3d and 4th, 1888, under the direction of a Committee of the State Board of Health and a Committee of Citizens of Hastings. Supplement to the Report of the Michigan State Board of Health for the year 1889.

Some of the subjects treated of are: The Degenerations of age, Prevention of Diseases of the Eye and Ear, The Germ Army, Sanitary Ceilings and Walls, Food and its Adulterations, The Prevention of Communicable Diseases, School Hygiene.

Annual Report, of the Supervising Surgeon-General of the Marine-Hospital Service of the United States for the fiscal year 1888.

WEEKLY ABSTRACT OF SANITARY REPORTS, issued by the Supervising Surgeon-General, M. H. S., under the National Quarantine Act of April 29th, 1878. Vol. III., Nos. 1 to 52, Washington, 1889.

OFFICIAL REPORTS, of the Trustees and Officers of the State Hospital for the Insane at Danville, Pennsylvania, October 1st, 1886, to September 30th, 1888. S. S. Schultz, M. D., superintendent.

EXTRA-UTERINE PREGANCY. I. Its Pathology, by Franklin Townsend, M. D.; II. Its Diagnosis, by Joseph Price, M. D.; III. Its Treatment, by E. E. Montgomery, M. D.; IV. Observations—Clinical, Pathological and Surgical, by W. H. Wathen, M. D.; V. A Critique of its Management, by J. M. Baldy, M. D.; VI. The Technique of the Operation, by John B. Deaver, M. D.; VII. Its Management when the Fetus Survives Tubal Rupture and goes on to the Period of Viability, by L. S. McMurtry, M. D.; VIII. Its Treatment (concluded), by A. VanderVeer, M. D. A Discussion. From the Transactions of the American Association of Obstetricians and Gynecologists, 1888; together with an Editorial Review of Tait's Ectopic Pregnancy and Pelvic Hematocele, from the *Buffalo Medical and Surgical Journal.* Philadelphia: Wm. J. Dornan, 1889. Price, 75 cents.

Surgical Progress.

THE PROBING OF GRANULATING WOUNDS. By R. von Mosetig Moorhof.—The author utters a timely warning against the too frequent abuse of the probe in granulating wounds. Septic infection can be produced not only through unclean instruments, but by means of the most carefully disinfected probe. The granulating surfaces exposed to the air, probably have upon their surface harboring places for bacteria. So long as the granulations remain intact, these germs are innocuous; as soon as the granulations are injured, the lymphatic spaces are opened, into which the cocci pass. They quickly multiply and initiate progressive septic processes. These dangers are diminished by careful disinfection of the wound as well as of the probe before introducing the latter. Cauterization of the surface with nitrate of silver previously, or simultaneously with the use of the probe by coating the latter with the melted salt, is recommended as an efficient method of preventing infection.—*Wiener Med. Presse, 1888, No. 15.*—(*Annals of Surgery.*)

A NEW MODE OF TREATING TUBERCULOUS PROCESSES. By A. Landerer (Leipsic). An experimental study of tuberculous affections, with a view to their cure, extending over a period of five years, and still unfinished for want of time.—Tuberculous affections of the more severe forms, such as suppurative, cheesy, necrobiotic processes can heal by cicatrization. Now tuberculous inflammations, having only a limited blood-supply (due to the slight vascularity of the formations), are not prone to cicatrize. Hence it becomes necessary to establish an inflammation at the points affected, in order to produce a solid cicatrix and thus cure the disease. The author seeks to establish an aseptic inflammation by chemical means. Carbolic acid and sublimate are not eligible for this purpose on account of their being too quickly absorbed; others, such as creoline, have not yet been tried.

After numerous experiments the author came to prefer Peruvian balsam, to which he attributes an excellent anti-tubercular action. This substance requires to be brought into contact with every portion of the tuberculous disased tissues, and in a sufficiently concentrated form. For tuberculous ulcerations of the skin, he uses a plaster prepared with one part balsam to three or five parts of adhesive plaster, to which one part of wax may be added. For fistulæ and deeper seated ulcerations, he uses a solution of the balsam in sulphuric ether, (one in three or one in five) for injection. For injection into the tissues he uses an emulsion of the concentration of one in 400 or 500 and alkaline in reaction, being a suspension of an emulsion prepared with oil of almonds in a 0.7 per cent solution of salt. In order to combat the disease in the entire system, and reach such foci as are situated at points removed from the surface (as in the lungs), he makes intravenous injections of this emulsion, taking care always to observe the size of the globules with the microscope beforehand in each case so as to ensure their not being larger than a red blood-corpuscle. If this is the case he expects the particles to be deposited by the blood-current at the foci of disease, as has been experimentally shown of other bodies by Schuller and others.

After perfecting the technique (which is accurately described) by injections in healthy rabbits, the author next inoculated a number of other rabbits with tuberculous material, and then treated them according to his methods, with more or less efficiency, according to the intensity of the infection and the care taken to cure it. Microscopic examination appears to verify the author's expectations as to the formation of connective tissue around the foci.

The observations made of this method of theatment in human subjects amount to 51 in number. Sixteen cases of tuberculous lymphatic glands of several years standing, and repeatedly but unsuccessfully treated by operative methods, were permanently healed within four to twelve weeks. Twenty-nine cases of bone disease, generally implicating joints (white swelling), some of which had refused amputation, were cured and their general health wonderfully improved after treatment by injections, combined in some cases with minor operative procedures.

Four cases of lung-tuberculosis were also treated by intra-venous injections. Two recovered after cure of bone disease; two others improved for a time; one could not be treated sufficiently long. One case of tuberculosis of the bladder was much improved after a mixed treatment.—*Munchener Medicine. Wochenschrilt, 1888. No. 40 and 41.* (*Annals of Surgery.*)

Diagnosis and Treatment of Cancer of the Breast.—Dr. J. Collins Warren (*Boston Medical and Surgical Journal*, April 11th, 1889,) thinks it is generally agreed at present to remove the whole gland and a more liberal supply of integument than formerly. Sometimes vertical incisions are preferred to the customary horizontal cuts, as affording better drainage. But the most important feature of this part of the new operation is the careful dissection of the fascia from the pectoral muscle, for it is in this tissue that capillary lymphatics are concealed, which form hiding places for the outposts of the disease. Careful attention should also be paid to the margin of the pectoral muscle; not only should the fascia which covers in the axilla be dissected off from it, but its lower border should be well freed from fat and connective tissue. The axilla is best opened by a cut through the skin along the edge of the pectoralis, until we come to the edge of the coraco-brachialis. Continuing down on this muscle a short distance with the knife, the skin and superficial fat drop away sufficiently to disclose the great vessels lying beneath a thin fascia. Opening this fascia backward along the line we have come, exposes the contents of the axilla, and especially the branches of the vessels, which can now be secured as the operation progresses. A pyramidal mass of fat is now dissected out, the apex reaching sometimes to the clavicle, the base frequently extending deeply on to the subscapular group of muscles. The glands which lie near the clavicle will have to be removed separately, and can best be enucleated from the neighborhood of the vessels by the finger. If they are numerous, the pectoralis can be separated on the line selected for the ligature of the axillary artery below the clavicle, and the glands and some of the loose tissue can be readily removed.—*American Journal of the Medical Sciences.*

Dr. E. S. McKee, of Cincinnati, read a paper on "Prolapse of the Ovaries," before the last meeting of the Kentucky State Medical Society. This disease, he thought, much more frequent than generally considered. He said it was a symptom often rather than a separate disease, yet it had many peculiar characteristics which entitled it to distinct consideration. The dislocation may occur: Into the lateral pouch of Douglas, the true pouch of Douglas, and the anterior or vesicouterine pouch, or the infundibulum of the inverted uterus. The last position is seldom found, and the next to the last is one of rarity.

Causes which lead to this trouble may be increase of weight, which induces traction from below or pressure from above, causes which produce feebleness or lengthening of supports, as the conditions present during the puerperium, congestions, displacements, particularly the posterior ones, or violent straining at stool. The left ovary is more often prolapsed, because of its greater enlargement during pregnancy and because it is more subject to disease. There are several reasons for this fact in connection with this ovary, the principal one being the valveless state of the left spermatic vein which renders the vessel easily affected by an obstruction of the circulation.

Marked pain on walking, and coition with torturing pain on defecation, are experienced by the patient, and occasionally hysteria and melancholia. Spasms of sickening neuralgic pain are felt in the pelvis and surrounding parts.

The displacement of the ovary usually occurs in this manner: It sinks downward and backward and describes an arc toward the median line. The fallopian tube and ovarian ligament form chords. The descent of the ovary brings it to that part of the pelvic fossa known as the retro-ovarian shelf, where it may remain.

Usually, diagnosis is not difficult. If not found easy, the patient should be examined on her left side, as the finger reaches at least half an inch higher up the posterior vaginal wall in that position. An anæsthetic may sometimes be of service. Rectal examination will allow the finger to reach an inch higher up into the pelvis than per vaginam. The elevation of the pelvic contents en masse must not be mistaken for mobility of the ovary.

The prognosis will depend on the condition of the ovaries, the presence or absence of complications, and the duration of the disease.

The author considered Campbell's position, on the knees and chest, of much benefit as one of the means of treatment. He thought pessaries do more harm than good. The intestines should be kept empty with some preparation of mercury. If sexual intercourse be permitted at all it should be carefully regulated. Superior advantages result from Bozeman's method of columning the vagina with the patient in the knee and chest postion. He discussed Schultze's method, but considered it still under inspection. Oophorsaphy was an operation of much merit in the judgment of Imlach, of Liverpool, but other writers do not accord with him. Tait's operation had not been followed by the permanent good results expected. The essayist had seen prolapsed ovaries follow the ascending uterus as it escaped from the pelvis at the fourth month of pregnancy, and after delivery they remained in the proper places. Hysteroraphy affords relief to some cases and sometimes as a dernier resort, extirpation becomes a necessity.

THE ANTISEPTIC REMOVAL OF SO-CALLED LOOSE BODIES FROM THE JOINTS.—Dr. Samuel B. Woodward (*Boston Medical and Surgical Journal*, April 25th, 1889,) has been able to collect (principally from English and American sources) 105 cases where claim of direct antiseptic incision of a joint for removal of a foreign body is made. In 104 of them the knee was the joint affected. The list includes, in addition to 92 operations for the simple removal of over 740 loose cartilages (400 in one instance being present,) one operation where, besides the removal of a cartilaginous body, a vascular tumor two inches in diameter was cut away with scissors, and another where a bony tumor was removed with a saw. In one case the foreign body proved a sarcoma; in one a fibroma; in one a lipoma; and in another a fibro-fatty tumor. In two cases loose pieces of bone were removed; in one a thorn, supposed before the operation to be a spicula of bone, and twice bullets were extracted. One of these had been thirteen years in a joint. In two cases "nothing could be found"; but, in one of these, anhesions on the back of the patella were forcibly broken up. There was but one death from the 105 operations, and as that was due to "phlegmonous erysipelas," the asepsis of the operation is at least doubtful. In two cases suppuration demanded amputation of the thigh, after which the patient recovered.

One of these cases was after removal of a "fibro-fatty body" by Dr. R. F. Neil, where there was "severe manipulation" of the joint; the other was at St. Thomas' Hospital, and no particulars are given.

Stiffness of the affected joint is reported in three cases. In one of these cases 400 loose cartilages were removed, and in the other two, 25 and 4 respectively. In four other cases slight impairment of motion is reported. In one of these there were adhesions and stiffness before operation, but no loose body.

The second was one where a bony tumor was also sawed off. In the third, recovery was complicated by a secondary hemorrhage, rheumatic fever, and pericarditis. Of the fourth, we have no particulars. In all other cases prompt recovery, with good motion of the affected joint, resulted. In place of Larry's death rate of 21.3 per cent. and Barwell's of 8.3 per cent., we have here a death rate of less than 1 per cent. (0.9 per cent.,) with great doubt whether the single death should be recognized as the result of an antiseptic operation; while in but ten cases (9.5 per cent.) was there failure to produce a perfect joint with good motion. With proper care before, during, and after this operation, there seems to be then but a remote chance of loss of limb, and almost no risk to life, and although in complicated cases there is possibility of more or less resulting stiffness, it is to be remembered that a joint containing loose cartilage is a constant source of annoyance, and that the possessor is always more or less crippled by it.

"Procursive" Epilepsy.—"This term is in far more common use among the French than with us. It means an attack the chief feature of which is a propulsion of the body in some special direction; it is apparently not accompanied by actual loss of consciousness, or followed by coma; its duration does not exceed that of an ordinary epileptic fit; according to Bourneville and Bricon, it is attended with marked congestion of the face. These cases are known to be epileptic by their associations as well as by the character of the attack, the element of suddenness being very marked. In the same individual they may be replaced by epileptic fits, or they may replace a true epilepsy with loss of conciousness. There is, indeed, nothing so very remarkable in their occurance if they be regarded from a physiological standpoint. They are the equivalents of head-banging and head-shaking in infants and children. The actual kind of movement varies much in different cases—in some a rapid revolving of the body around its horizontal axis, in others a rotation in a large circle, and in others a movement recalling that performed by some clowns. The highest expression of consciousness—if this be perfect control over volitional effects—is evidently lost, since the patient can not prevent himself from preforming the absurd antics."—*Lancet.*

Dept. of the Interior, Census Office,
Washington, D. C., May 1st, 1889.

To the Medical Profession:

The various medical associations and the medical profession will be glad to learn that Dr. John S. Billings, Surgeon U. S. Army, has consented to take charge of the report on the mortality and vital statistics of the United States as returned by the eleventh census.

As the United States has no system of registration of vital statistics, such as is relied upon by other civilized nations for the purpose of ascertaining the actual movement of population, our census affords the only opportunity of obtaining near an approximate estimate of the birth and death rates of much the larger part of the country, which is entirely unprovided with any satisfactory system of state and municipal registration.

In view of this, the census office, during the month of May this year, will issue to the medical profession throughout the country "Physician's Registers" for the purpose of obtaining more accurate returns of deaths than it is possible for the enumerators to make. It is earnestly hoped that physicians in every part of the country will co-operate with the census office in this important work. The record should be kept from June 1st, 1889, to May 31st, 1890. Nearly 26,000 of these registration books were filled up and returned to the office in 1880, and nearly all of them used for statistical purposes. It is hoped that double this number will be obtained for the eleventh census.

Physicians not receiving registers can obtain them by sending their names and addresses to the census office, and, with the register, an official envelope which requires no stamp, will be provided for their return to Washington.

If all medical and surgical practitioners throughout the country will lend their aid, the mortality and vital statistics of the eleventh census will be more comprehensive and complete than they have ever been. Every physician should take a personal pride in having this report as full and accurate as it is possible to make it.

It is hereby promised that all information obtained through this source shall be held strictly confidential.

Robert P. Porter, *Supt. Census.*

PROCEEDINGS

OF THE

NEBRASKA

State Medical Society

TWENTY-FIRST ANNUAL SESSION

HELD AT

KEARNEY, MAY 21ST TO 23RD, 1889

OFFICERS—1889-90.

J. C. DENISE,	Omaha,	President.
D. A. WALDEN,	Beatrice,	1st Vice President.
G. L. HUMPHREYS,	Kearney,	2d Vice President.
M. L. HILDRETH,	Lyons,	Secretary.
L. A. MERRIAM,	Omaha,	Corresponding Secretary.
W. M. KNAPP,	Asylum,	Treasurer.

COMMITTEES

CREDENTIALS.

M. L. Hildreth, J. W. McConnell, Charles Inches.

ARRANGEMENTS.

D. A. Walden, R. S. Albright, J. W. Harris.

GRIEVANCES.

A. B. Newkirk, J. C. F. Bush. Joseph E. Hall.

NECROLOGY.

O. C. Reynolds, M. J. Gahan, D. D. Potter.

AUDITING.

E. M. Whitten, A. H. Jackson, J. W. Bullard.

PRACTICE OF MEDICINE.

Donald Macrae, A. Shipman Alice Huff.

SURGERY.

A. F. Jonas, William Protzman, M. V. B. Clark.

OBSTETRICS.

Sophronia M. Lane, Mary R. Butin, Eleanor S. Dailey.

GYNÆCOLOGY.

A. S. v Mansfelde, Fred. D. Haldeman, D. R. Pelton.

NERVOUS AND MENTAL DISEASES.

L. A. Merriam, L. A. Butler, E. F. Root.

ANATOMY AND PHYSIOLOGY.

H. G. Leisenring, T. P. Livingston, J. A. Miller.

OPHTHALMOLOGY AND OTOLOGY.

D. C. Bryant, L. B. Smith, Tracy R. Clark.

MATERIA MEDICA AND THERAPEUTICS.

James Carter, C. F. Ballard, J. R. L. Duncan.

PUBLIC HYGIENE AND MEDICAL LEGISLATION.

W. F. Milroy, W. M. Knapp, M. W. Stone.

PATHOLOGY AND HISTOLOGY.

G. L. Humphreys, J. T. Wade, W. A. Chapman.

LARYNGOLOGY.

E. A. Benton, Sylvanus Person. John H. East.

DERMATOLOGY.

C. M. G. Biart, J. Williams, D. T. Martyn.

MEDICAL JURISPRUDENCE, MEDICAL CHEMISTRY AND TOXICOLOGY.

W. O. Henry, Marshal Bedel, N. F. Donaldson.

MINUTES

OF THE

TWENTY-FIRST ANNUAL SESSION.

KEARNEY, MAY 21ST TO 23D, 1889.

KEARNEY, May 21st, 1889.

Society called to order at 7:30 p.m., in Masonic Hall, by the president, Dr. Milton Lane.

The following permanent members signed the roll during the session: G. L. Humphreys, Kearney; H. Link, Millard; A. Shipman, Plattsmouth; F. D. Haldeman, Ord; L. J. Abbott, Fremont; A. E. Stuart, Cedar Bluffs; T. H. Butler, Harvard; J. W. Bullard, DuBois; J. T. Miller, Holdrege; Charlotte M. Norton, Lincoln; W. S. Gibbs, Omaha; Alice E. Huff, Lincoln; S. K. Spaulding, Omaha; J. T. Wade, Arlington; J. W. Sanders, Broken Bow; N. F. Donaldson, North Platte; C. W. Bullard, Grafton; D. C. Bryant, Omaha; O. C. Reynolds, Seward; D. D. Potter, Seward; Chas. Inches, Scribner; M. W. Wilcox, Harvard; R. C. Moore, Omaha; H. C. Demaree, Roca; Eliza B. Mills, Kearney; W. M. Knapp, Lincoln; E. Tanner, Battle Creek; Milton Lane, Lincoln; J. J. Porter, Kearney; G. M. Mills, Kearney; E. A. Benton, Central City; V. H. Coffman, Omaha; A. F. Jonas, Omaha; E. M. Whitten, Nebraska City; R. M. Stone, Omaha; Jno. E. Summers, Jr., Omaha; J. C. Denise, Omaha; L. A. Merriam, Omaha; M. L. Hildreth, Lyons; D. A. Walden, Beatrice; Geo. M. Hull, Kearney; B. F. Farley, York; C. M. Easton, Hebron; A. S. v Mansfelde, Ashland; W. O. Bridges, Omaha; L. B. Smith, Fremont; M. J. Gahan, Grand Island; W. H. Wilson, Table Rock; B. T. Whitmore, Lincoln; D. L. Woodard, Hampton; A. R. Allen, Bradshaw; T. E. Coulter, Waterloo; M. A. Hoover, Kearney; G. W. Shidler, York; W. C. Campbell, Creighton; C. D. Evans, Columbus; W. O. Henry, Pawnee City; J. H. East, Rising City; P. D. Hall, Mead; W. Ackley, Juniata; D. T. Martyn, Columbus; T. R. Clark, Geneva; W. H. Linn, Hastings; G. H. Peebles, Lincoln.

Dr. Haldeman was elected assistant secretary.

REPORT OF COMMITTEE ON CREDENTIALS.

We, your Committee on Credentials, had referred to us the applications of the following gentlemen by the Secretary, who in each case received the usual dues and such references as usage has established:

Andrew B. Somers, Omaha, College of Physicians and Surgeons, New York City, 1872.
Anton Keller, Falls City, Jefferson Medical College, 1883.
Edward H. Smith, Fullerton, McGill University, Canada, 1881.
Edwin O. Beardman, Overton, Rush Medical College, 1878.
M. A. Perkins, Trumbull, Kentucky School of Medicine, 1887.
Benjamin F. West, Nelson, Rush Medical College, 1881.
Frank E. Duckworth, Kearney, College Physicians and Surgeons, Chicago, 1888.
William J. Harris, Beatrice, Rush Medical College, 1866; Long Island Medical College, 1875.
Nicholas McCabe, North Platte, Medical Dep. University of Buffalo, 1886.
S. A. Wright, Pawnee City, Northwestern Medical College, 1883.
Geo. W. Brandon, Milford, Rush Medical College, 1871.
Ira N. Pickett, Odell, College Physicians and Surgeons, Indianapolis, 1878.
B. B. Davis, McCook, Minnesota College Hospital, 1884.
Benjamin F. Crummer, Omaha, Michigan University, 1869; University City of New York, 1875.
Milton H. Everett, Lincoln, (Delegate Lincoln Medical Society) Rush Medical College, 1870; Jefferson Medical College, 1885.
George W. Meredith, (Delegate Lincoln Medical Society) Indiana Medical College, (Butler University) 1873.
Aleck V. Robinson, Ashland, Bellevue Hospital Medical College, 1881.
Charles F. Kirkpatrick, Ashland, Columbus Medical College, 1882.
James Allen Paddock, Wilber, Bellevue Hospital College, 1874.

In the consideration of every one of these applications your committee has been governed by the practice of the Committee on Credentials for the year 1888; the action of which was so fully approved by the Society, that it instructed its committee for 1889 to follow the same method, to-wit: That the member of the committee in whose Congressional district the applicant resides, shall personally investigate the social and professional standing of the applicant; and in no case shall such applicant be recommended for membership by the committee, unless the member, in whose district the applicant resides, vouches for the applicant.

This rule has been strictly adhered to in every case, and upon examination, the members of the Society will find that each application has been carefully investigated.

We, therefore, cheerfully recommend the parties named to membership.

We further respectfully submit that we have not made an investigation of delegates from chartered medical societies, because such societies are collectively responsible to the Nebraska State Medical Society for the delegates which they send to the State Society.

Your committee would further suggest that no delegates from any society be recognized, except such society has been duly chartered as an auxiliary to the State Society. It would be a great injustice to place societies, which have gone to the inconvenience and expense of procuring a charter from the State Society, upon the same footing with other bodies, which have not become auxiliaries of the State Society, nor seek such affiliation.

We also recommend, as the only means afforded for a proper investigation of the claims for membership, the adoption of the constitutional amendments, concerning the admission of members, which have actually governed your Committee on Credentials for the past two years.

J. W. BULLARD, Chairman.

Report of committee adopted. Candidates elected. Constitution signed by the newly elected members.

On motion of Drs. Humphrey and Reynolds, Drs. Gordon, of Aurora; Hungate, of Conroy Springs, Kan., and S. F. Saunders, of Holdrege, were made members by invitation.

On motion, the reading of minutes of last annual meeting was dispensed with.

Report of Committee of Arrangements by Dr. Humphreys.

Thanks of the society tendered to committee, also to the citizens of Kearney for courtesies and kindness.

ADDRESS OF WELCOME.

BY DR. MARDEN.

Mr. President and Physicians of the Convention:

It is with great pleasure that I extend to you the hospitalities of Kearney, and I cordially welcome you to this city.

I was just talking with one of your physicians from Omaha, who said he never expected to see the time when horse cars would run in this city, and it must seem very strange to you to hold such a convention in this part of the state, especially those of you who came to this city in the early days of its history. I know you never expected to hold a convention in this locality, especially in Kearney. A gentleman told me the other day that when he first came to this city there was not a dwelling with the exception of one dug-out, and for miles and miles around were herds of Buffalo feeding on the prairies, and this was only seventeen years ago.

I notice by your programme that this is your twenty-first anniversary, and it seems to me that on this occasion it would be appropriate for me to state to you in a general way the progress of this part of the country, and some of the problems suggested to the physicians now located this side of the Mississippi River. When Dr. Atkinson first came to this part of the country it took him eight months, all the time on the road, to get to Oregon from New England, and he returned in just six days. It seems almost incredible when we think of the rapid advance of this part of the West, and still more strange for a convention of Physicians to be held now in this locality. It has been but a comparatively short time ago that there were but few settlers west of the Mississippi, and a gentleman from Massachusetts once said that the western limit for farming would be the Mississippi river, and that the land would never be worked west of that, and yet to-day over two and one-half millions live here. I saw a gentleman here from Chicago this winter who was there when Chicago was nothing but an Indian trading post, the Indians trading hides for fire water, etc. One gentleman who lives in Chicago now says he has seen the time when he could have bought the whole tarnal swamp for one dollar, and to-day Chicago is one of the largest cities in the world, and its growth has no parallel in the history of the world. We may speak of other cities nearer here, and some farther west. San Francisco a little over thirty years ago had but 40,000; to-day over 250,000 inhabitants. We might also speak of Kansas City, Omaha, and other cities near us, and the question of a dense population is a very serious one, when we consider it. You might put the whole population of the United States into the state of Dakota and they would have sufficient products to support them and some left to export, and when we consider that our population is increasing at the rate of over 2,000,000 per year, we can hardly realize what the results will be. China has a population of over 350,000,000, yet there is no doubt that exclusive of Alaska, and probably Texas, we could support the entire population of the world, and it is only a question of time when the population of the United States will equal the population of all the rest of the world. We have almost no conception of the advance of this country, and the wonderful growth it is having, and the growth of our own state, which is certainly more interesting to us. As I before said, I notice by your programme that this is your twenty-first anniversary. This is a very large state for only twenty-one years of age. In 1861, when this was a territory, they took away 250,000 square miles, more than Italy, and almost more than Japan, and we have still a large state. You may take Belgium, with 6,000,000 population, and still have room. We might put into the state of Nebraska 37,000,000 people, and then the population would not be as dense as Belgium. While Belgium has 482 people to the square mile, it would only take 14 to the square mile for Nebraska. It takes no mathematician when one is familiar with the subject, to find what the results will be. It takes France seventy-five years to double her population, while ours is doubled in twenty-five years. I was very much surprised on looking over this state in figuring up this matter to find that we could take all the territory east of the Hudson River, and then put in New Jersey and Delaware, and still have 5,000 square miles left. Any one looking into this matter would be surprised at the vast area of this state, and the present population, and yet it is but a few years ago that the people east said it would never be any account. I was looking at an old number of *Harper's Magazine* a short time ago in which mention was made of admitting Nebraska into the Union as a state. It was not more than eleven years ago that the C., B. & Q. did not have a line west of the Missouri River, and some time less than that that the Northwestern did not have a mile of track in Nebraska, and now they have eight or nine different lines. Come down to a little later date, we take for instance Omaha. One of her physicians just told me this morning that when this association was organized in that city, the population was but 4,000. Thirty-three years ago there were almost no settlers west of the Missouri River; and the land was considered almost worthless. Gentlemen have told me that they could have bought for $1 every foot of ground that Kearney now stands on. It seems that America was intended for the pleasant surrounding of all that is great and noble of the human family. Darwin says that all the assurance the typical American wants is that he can go farther west. It is very interesting to trace a man's progress westward, as we trace him across the Hudson and the Mississippi. It seems to me that this part of the country was really destined to be the Garden of Eden, and the Land of Promise. Suppose for a moment that he had started on his journey to the East, and had gone to Palestine. What condition would it have been in, and what condition would it be in to-day. The conditions of life have become seriously changed, and it is a fact well known to all of you physicians, that longevity has been increased, and according to statistics our American men are taller than the Germans, and much larger around the waist than the Irish, and every way better men; and it seems to me that the conditions in which we live are far superior to the conditions in any other part of the world, and a higher and finer type of manhood, and it seems to me if there is any place in the whole world where dignity of profession and scientific truth is required, it is in this country of ours. It seems to me that the cause is quite evident why the German leaves his native country and comes to ours. In his native country 22 to 25 per cent. of his earnings must go to support his country. He finds a president here who gets $50,000 per year, while he leaves a king to whom this is absolutely nothing, who gets $3,100,000. Think of a princess who gets $6,000,000, and others of the royal family who get $6,000,000, and 400 of them receive one-half of that, to say nothing of the other countries of Europe.

Do we wonder then that we have such a rush to this country. One-third of all Great Britian to-day must be fed on imported food. There is but one solution to this great problem. Dr. Oliver Wendel Holmes once said that if all the drugs were thrown into the ocean it would be all the better for mankind, and the worse for the fishes. It is vastly better to prevent a disease than to cure it, but the physician is never called until it is too late to help the patient. How to educate the people to a higher standard, and the best way to do it, is one of the greatest problems we have to solve. When one family's wealth equals 1-218th of all the rest of the people, we find aristocracy growing up almost equal to the aristocracies of Europe. The great fear is in the element which comes from Europe, and in many instances they have very limited ideas of the rudiments of life, which is one of the greatest foes to longevity, and the great problem is how to educate the people in the use of drugs.

Dr. Mansfelde responded as follows:

Mr. President, Ladies and Gentlemen:

I would like to know what the gentleman who has preceded me has left for me to say, and after having heard us both you will realize how difficult it was to answer him on this occasion. It seems to me that the gentleman has searched history carefully to see what kind of a country he lives in. However, he did not tell us much about Kearney. Kearney is what we are mostly interested in at the present time. Now I will take pains to give you a little of this history myself. Now, the farther west we go the more hospitality we meet. In the early part of this state's history there was a great deal of hardship and privation for the settlers, and there was a time in the history of Kearney, and that not very long ago, on the 1st and 2nd of June, 1880, that the Nebraska State Medical Society was convened in this same place. I also remember having seen Indian squaws take their papooses and tie them to boards and lean them up against the wall to sleep, which reminds me that at that time we had to stand up against the wall and sleep, there not being hotel room enough, and we did not have the soft, downy beds that we have this time to sleep in. When I was in front of the hotel last night a peculiar thought came to me. I remembered a little song that was very popular in my childhood days. Several barons being in a city, they were doing what the Methodists do, having kind of an experience meeting, each telling why he loved his country. One was speaking of the great armies they had, another the great wealth of his country, and finally, one small baron spoke out and said the reason he loved his country was that he dared to lay down wherever he was and nothing molest him in his slumbers. That idea came to me when I came to the hotel last night. I find that when you are in this country and you go to one of our hotels, you are entertained as well as if you were in the hostelry of a king, and he recognizes that he is a baron among kings, and I have no doubt at all that the people of Kearney have prepared themselves this time in such a way that it will be simply impossible for the doctors who come here to eat them out of house and home in the next two or three days, and when we depart from here we shall take with us a feeling that we realize that we are standing on the border line of progress of the great state of Nebraska. Let me assure you, gentlemen, that there is nothing small about the physicians of the state of Nebraska, so far as our stomachs are concerned, and I shall also add to this, brains. And I can assure the gentlemen here that we will leave a record that will enable them to say: "That is the kind of material we are made of." And in the next two or three days, if we accomplish what we are here for, and judging from the last twenty-four hours, we will, we will leave with a feeling that we will want to come back to you in a much shorter time than nine years.

SECRETARY'S REPORT.

Kind Providence once more permits me to bring to your notice the wants of our Society as they have presented themselves during the last twelve months.

In the first place, I desire to bring to your notice the result of your action, at the Lincoln meeting, regarding the collection of dues from delinquent members by the Secretary instead of the Treasurer. I did not receive the balance sheet, containing the individual indebtedness of members, from that officer until some time in March. Since that time I was fortunate enough to collect back-dues from fifty-two members, presenting the snug sum of $191. Yet, however gratifying this showing may be, in my humble opinion, it is by far outweighed by another result—the retention of eleven valuable members in the Society, who were by reason of non-payment of dues and the strict provisions of the constitution concerning delinquents, really lost to the Society.

My methods, which, from a business standpoint are perfectly correct, may be deemed somewhat severe by some members. Yet, if they will take the pains to look over some of the correspondence had with delinquents, they will at once admit that the loss of some members, whether precipitated by my method or not, was an actual gain to our Society. Some persons, who had owed the Society for years, upon a courteous request for payment, naively informed the Secretary to drop them from membership, this being their idea of discharging a just and honorable debt. Another batch of delinquents, added to this peculiar method of payment, the insulting statement that they did not owe the Society anything. A third class, I am sorry to say, are no doubt valuable members of the profession, but financial embarrassment seems to preclude the possibility of present payment. A list of these four classes of debtors is herewith submitted, as well as the correspondence had with them. I hope you will instruct your committee to look into this matter, and bring the same to final and satisfactory settlement.

A number of delinquents, a fourth class, have moved from the State. Your Secretary holds that such removal is not a very nice way of paying one's obligations to the Society. The American Medical Association has repeatedly rendered decisions, which warrant the conclusion that our Society should deem it a duty to inform the Secretaries of such State and Territorial Societies, whose territory may have been so unfortunate as to become the present home of such delinquents, that such members may not be received into their membership until they have paid their dues accrued to the time of their leaving the State of Nebraska, and of course the jurisdiction of our Society.

A balance sheet containing the indebtedness of members to the meeting in 1890, is herewith submitted representing the sum of $908. Add to this, the amount received at this session for membership fees, and the balance in the hands of the Treasurer, and the Society will know at a glance the available and unavailable assets of the Society. This is the first time in the history of the Society that its Auditing Committee will have the means on hand wherewith satisfactorily to look into the financial affairs of the Society and to report intelligently thereon.

In how far your action, creating the Secretary your collection agent, has been a wise one, my report will disclose; permitting the opportunity to decide, also, whether or not it is best to continue the practice.

I submit the request of Dr. A. J. Sanders to be dropped from membership. He is free from all charges, financial or otherwise, and his wishes should be complied with.

I take pleasure in bringing to your notice the state societies who meet at the same time with us, leaving it to your decision whether or not you will take notice of the fact:

Illinois, D. W. Graham, Jacksonville, May 21st.
Indiana, E. S. Elder, Indianapolis, May 21st.
Missouri, J. C. Mulhall, Springfield, May 21st.
Nebraska, A. S. v Mansfelde, Kearney, May 21st.
Connecticut, N. E. Wordin, Hartford, May 22d.
Ohio, G. A. Collamore, Youngstown, May 22d.

The following gentlemen received credentials to meetings of other societies: Dr. B. T. Whitmore, to the Mississippi Valley Medical Association, and Dr. A. Shipman, to the Iowa State Medical Society.

I bring to your attention the subjoined circular from the committee on revision of the United States Pharmacopœia, subject to your disposal.

During the year just past the experiment of journalizing the proceedings of the Society has been tried. A contract was entered into with Mr. H. J. Penfold, of Omaha, the publisher of The Omaha Clinic, to publish our Proceedings for 1888. He was paid $250 for, and in consideration of which, he agreed to print the Proceedings contiguously and to page them separately from the pages of The Omaha Clinic, so that members if they see fit, can have the Proceedings bound separately. He further agreed to furnish one copy of The Clinic from July, 1888, to June, 1889, both dates inclusive, to every member of the Society, also one copy to each society with which we exchange, and finally, fifty extra copies to the Secretary, to be used as the Society should direct.

This contract was not only kept to the letter, but both the publisher, Mr. Penfold, and the editor, Dr. Denise, were not only willing, but on every occasion met your Secretary with zeal to further the best interests of the Nebraska State Medical Society. The Omaha Clinic is not a money making institution, its promotors gain nothing but hard work, which they are willing to give gladly, provided the profession appreciates their efforts. The Omaha Clinic is established for the physicians of the great Northwest. They should in their turn take an interest in it.

Financially this undertaking has proven a great success to the society. Every member for the sum of $1 has received a copy of a journal as good as any of its kind, and it will grow better as it grows in age and appreciation. Thousands of physicians have read the papers which have been submitted here, where formerly they were not read by hundreds. Formerly they were unknown to the outside world, now they are read and commented on everywhere in the Union. Not one tenable reason can be urged why we should not continue the experiment. The Secretary thinks that a more profitable arrangement can be entered with the publisher. He ought to be willing to bind every member's copy, who wishes to preserve his file complete, for the $250 the Society will pay him, and also furnish fifty extra bound copies to the Secretary for the Society's use. If such agreement can be made, your Secretary would urge its acceptance.

During the year one county society has requested to be duly chartered as an auxiliary of the State Society—the Hamilton County Medical Society. The request was granted by your President, upon submission of the constitution and by-laws of said society.

It has hitherto been the practice of our Society to have a charter executed for each society making a request for it. This involved the outlay of every cent of the ten dollars usually received for the same, besides a uniformity of design was impossible. Your Secretary has therefore taken it upon himself to correct these evils, by procuring a simple but chaste blank charter, which can be issued to any society, of whatever pretensions, with credit.

In this connection I wish to emphasize the importance of societies of every county, duly chartered by and auxiliary to the State Society. By this means we will be able to establish a union of professional interests which can be attained in no other way.

The necessity of a revised printed list of the members and their addresses is very much felt by the Secretary, and he requests that he may be empowered to procure the same. In this connection I suggest the need of a complete list of physicians living in the state. The Medical and Surgical Register of the United States will approximately fill that want, and I request the means for the purchase of one.

Attached, an itemized account of the Secretary's expenses is submitted, and the continuance of the usual allowance for the same purpose requested.

Report referred to special committee.

REPORT OF CORRESPONDING SECRETARY.

It is with pleasure, I, for the second time, present you my report and review of such Transactions of Medical Societies as have come to me during the past year, embracing thirty-two volumes and occupying 8,772 pages of reading matter. These have been carefully read, and much pleasure and profit have I had from their perusal. A copy of the Proceedings of Nebraska State Medical Society for 1888, has been sent to the Secretary of each State Medical Society. Several Societies have failed to send their Proceedings as will be seen by referring to the tabulated report on page 7.

Medical societies ought not to be the school where physicians learn how to prepare and read commonplace essays that would be severely criticised for their lack of thought in any high school. Yet, a great many of the papers read and published are nothing but school-boy compositions, devoid of thought or even literary merit. Others are elegantly written essays, abounding in poetic gems and beautiful figures, classic in their entire make-up, and very interesting to read, but so little that is medical or surgical, that it seems to be out of place in a medical society. Others, again, are reports of commonplace cases in practice that have not an interesting feature about them, and seem to be only an excuse for having promised to furnish a paper. But there are, here and there, some fine, scientific and scholarly productions that are models of excellence, and give evidence of deep research and untiring labor. I refer especially to the papers contained in the Transactions of the New York State Medical Association and the New York State Medical Society. Last year I called attention to a new feature of society work, and I now present the plan again as one worthy to be followed by the Nebraska State Medical Society. It is the following, viz.: Divide a topic into different parts and have different physicians prepare a paper on each part. In the Transactions of the New York State Medical Association for 1887, is an illustration, viz.:

"Remarks introductory to a discussion on the management of compound dislocations of the ankle-joint, By Dr. E. M. Moore. Question 1st. When should amputation be practiced, and when should other methods be employed? By Dr. U. C. Linde. Question 2d. If amputation be performed, at what point should it be made to render the stump most useful, the risks to be encountered being equal? By Dr. Joseph D. Bryant. Question 3. Should the luxation be merely reduced, or should some bony tissue be removed, and if so, how much? (two papers) 1st. By Dr. Frederick Hyde; 2d. By Dr. Charles W. Brown. Question 4th. What dressing and after-treatment will conduce to the best result with least risk to the patient? By Dr. Frederick S. Dennis."

Here we have six long, carefully written, and scientific papers upon "Compound Dislocation of Ankle-joint," and occupying forty-five pages. Placenta Prævia is in like manner discussed by eleven physicians. Typhoid Fever is discussed likewise by seven different physicians of national reputation and occupying eighty-seven pages.

I trust some arrangement will be made to adopt this method in our society for the coming year. The Nebraska State Medical Society produced thirty-one papers last year, ranking fourth in number of papers presented, while the quality of the papers is far above the average, and only surpassed by few. The whole number of papers presented to the different societies in my report is 754, which is a poor showing from so many members as are found in the various state societies of our nation. It would look well for the profession in Nebraska if they would do more original work, and report more cases in actual practice.

In my report I have not transcribed the new ideas or theories presented, because they have very generally been published in the medical journals of the country, and these all progressive medical men take and study. In this connection it would be interesting to know what and how many, medical journals the different members of this society receive and read. Too many physicians take none whatever, while many physicians, who take several journals seldom give them careful study. This is the only way in which I can account for the meager literature found in these society transactions.

Dr. L. A. Merriam, Cor. Sec'y,
May 22d, 1889. Omaha, Neb.

Note—All transactions of other societies should be forwarded to the Corresponding Secretary.

Referred for publication.

TABULATED REPORT OF SOCIETY PROCEEDINGS.

SOCIETIES	BINDING	PAGES	MEMBERS	ATTENDANCE	PAPERS AND REPORTS	REMARKS
Alabama						Not received.
Arkansas, 1888	Paper	125	188		15	Papers of average quality. No discussions reported.
California						Not received.
Colorado, 1888	Paper	120	146		13	Creditable papers, worth studying. Excellent discussions reported.
Connecticut, 1888	Paper	240	494	36	19	Of the 19 essays 13 were read by title. Six only being read and no discussions reported. A slim attendance and poor showing for the large membership. The quality of the papers is excellent.
Dakota						Not received.
Delaware, 1888	Paper	16	116	24	3	No papers or reports of cases published. President's address and two papers said to have been presented. A very poor showing for a Society one hundred years old.
Florida						Not received.
Georgia						Not received.
Illinois						Not received.
Indiana						Not received.
Iowa						Not received.
Kansas, 1873 to 1883	Cloth	535	291	81	75	Eleven years Transactions bound in one volume. Some very fine papers. A great improvement over preceding years. No discussions reported.
Kentucky, 1888	Paper	14	213			A report of Proceedings only.
Louisiana, 1888	Paper	306	171		16	Some excellent papers, especially one on Teratology. No discussions reported.
Maine, 1888	Paper	183	285		13	Fair essays and brief discussions. Nothing particularly new or valuable.
Maryland, 1888	Paper	250	208		17	Fine literary papers, but little that can be called scientific or progressive. Discussions briefly reported.
Massachusetts, 1888	Paper	165	1,696	106	6	Lengthy and scholarly papers, worthy careful reading. No discussions reported.
Michigan, 1888	Paper	365	427	250	30	Excellent, well-written papers, with discussions well reported. Vesication in pneumonia and pleurisy, and fumigation with sulphur in diphtheria are advocated—Don't do so, there are better methods.
Minnesota						Not received.
Mississippi, 1887	Cloth	148	233	46	28	Papers brief and without marked ability. No discussions reported.
Mississippi, 1888	Cloth	146	247	47	10	Fair papers only. No discussions reported.
Missouri, 1888	Cloth	462	260		42	A few good papers and some discussions About one paper to six members. More study and enthusiasm would make a better Society.
North Carolina						Not received.
New Hampshire, 1888	Paper	182	207		9	Good essays, well-written, with some excellent and extended discussions. The 207 members ought to furnish more scientific papers.
New Jersey, 1888	Paper	262	632	114	30	One fine address. Two scholarly essays Eight brief but interesting reports of cases. Nineteen statistical and valueless reports from District Societies, with no discussions reported, make up the volume.
New York, 1885	Cloth	400		124	35	These volumes should be on the shelves of every progressive physician, as they contain valuable papers written by able and scientific physicians, and embracing many of the best thoughts and discoveries of medical and surgical science known at the present time. Complete reports of the able discussions are printed, and these are very valuable.
New York, 1886	Cloth	680		242	59	
New York, 1887	Cloth	689		244	50	
New York, 1888	Cloth	691		253	59	
New York Association, 1888	Cloth	554	665	171	36	A beautiful volume, rich in progressive medical science, and should be carefully read by every progressive physician. Discussions well reported and excellent reading.
N. Y. Academy of Medicine						Not received.
Ohio, 1888	Cloth	308	527		21	Thoughtful, scholarly papers, worthy a careful perusal, and indicating that the profession in Ohio are able and progressive.
Oregon, 1888	Paper	129	99		11	Brief papers and reports of cases, without reported discussions. Average only in quality.
Pennsylvania, 1887	Cloth	283			21	Most excellent papers. No discussions reported.
Pennsylvania, 1888	Cloth	355			25	Fine literary and scholarly papers, with extended discussions worth a careful reading.
Rhode Island						Not received.
South Carolina, 1888	Paper	178	166	38	21	Papers above the average, and worthy of perusal. No discussions reported.
Tennessee, 1888	Paper	215	258	62	18	Fair papers only. Discussions brief.
Texas, 1888	Paper	300	451		28	The papers presented are carefully written and worthy an attentive perusal. So excellent a Society ought to report their discussions.
Vermont, 1887	Paper	90		29	18	Papers not equal to last year. Average quality. No discussions reported.
Virginia						Not received.
West Virginia, 1888	Paper	98	160	27	11	Brief papers, exhibiting little study and ability. No discussions reported.
Wisconsin, 1888	Paper	244	262	100	20	As usual the papers are above the average, showing scholarship and study. Good discussions. All of which are pleasant reading.
Detroit Medical Library Association, 1888	Paper	93				Brief reports of cases in practice, and exhibition of pathological specimens. Discussions reported.

TREASURER'S REPORT.

I have the honor to submit herewith, my report as Treasurer, of the receipts and disbursements of funds belonging to the Society for the past year:

RECEIPTS.

From former Treasurer	$ 12 95
From A. S. v Mansfelde, Sec., balance of unexpended appropriation of 1887, for expenses of Secretary's office	4 36
From A. S. v Mansfelde, Sec., membership fees and annual dues 29 new members	145 00
From R. C. Moore, former Treasurer	14 00
From members at Lincoln—annual dues	238 00
From members since the Lincoln meeting	100 00
From A. S. v Mansfelde, Sec., dues of members	188 00
Total	$702 31

DISBURSEMENTS.

Voucher No. 1, L. A. Merriam, expense Corresponding Secretary's office 1887 and 1888	$ 9 11
Voucher No. 2, A. S. v Mansfelde, appropriation for Secretary's office 1888 and 1889	100 00
Voucher No. 3, W. M. Knapp, postage and stationery 1887 and 1888	5 00
Voucher No. 4, Janitor's services 1888	8 00
Voucher No. 5, Stenographer 1888	15 00
Voucher No. 6, Omaha Clinic, printing proceedings	250 00
Voucher No. 7, Omaha Clinic, printing Board of Health laws	8 50
Balance in treasury	306 70
Total	$702 81

In this connection allow me to call the attention of the members of the Society to the unsatisfactory and expensive manner of collecting the annual dues from members, as the result of a resolution adopted at the annual session of 1888, and to suggest that if it be desirable for the Secretary to keep the accounts of members, and to collect annual dues; that the Treasurer be relieved of this duty. Otherwise two sets of books must be kept and double expense to the Society incurred by notices, postage, etc., aside from the difficulty of keeping the accounts correct without unnecessary correspondence between the Treasurer and Secretary.

I also submit herewith a list of members who are three years or more in arrears, and who, according to By-Laws, Art. III, are "subject to loss of membership," and ask that such action be taken thereon by the Society as in their judgment the case demands.

All of which is most respectfully submitted.

W. M. Knapp, Treas., N. S. M. S.

On motion, referred to same committee as Secretary's report, except so much of it as refers to the financial condition of the Society.

On motion of Dr. Moore, the amendment offered by Dr. Knapp at the last meeting was adopted.

By Dr. R. C. Moore:

Resolved, That the amendment of the constitution known as "An Amendment to Section 3," adopted at the last session, be repealed.

The following standing resolution was offered by Dr. Mansfelde:

Resolved, That hereafter any member shall have the right to submit for publication as elaborate a paper as he wishes, but he shall be limited to twenty minutes in the reading, and ten minutes for the closing of the discussion; and members rising to discuss papers shall do so but once for each paper read, and not occupy more than five minutes.

On motion of Dr. Carter, the Committee of Arrangements were instructed to see to it that a competent stenographer is secured for the entire session.

REPORT OF COMMITTEE ON GRIEVANCES.

In the matter of charges against J. S. Leonhardt preferred by the Secretary, we recommend that he be expelled from the Society. Papers in the case are hereunto attached.

W. M. Knapp,
J. W. Bullard, } Com.
N. F. Donaldson,

By unanimous vote of the Society (57 votes) Dr. Leonhardt was expelled.

REPORT OF AUDITING COMMITTEE.

We, your Auditing Committee, would respectfully beg leave to submit the following report:

Having carefully examined the reports of the Secretary and Treasurer, we find them financially correct. There is reported $306 70 on hand at the opening of this session, which, with the dues paid at this meeting will be ample funds to pay the current expenses of the Society for the coming year, without any assessment.

We would further recommend, in accordance with the Treasurer's suggestion, that the Secretary should collect all monies due the Society and turn them over to the Treasurer, taking his receipt therefor. This will materially simplify the examination of accounts, and keep the accounts in a satisfactory condition.

Inasmuch as we are in no financial distress at the present time, we would reccommend that the resolution passed last year ordering the suspension of members in arrears, be rescinded.

Further, we would recommend, that the Proceedings of this Society be published in book form instead of in journal as was done last year.

All of which is respectfully submitted.

E. A. Benton,
M. W. Wilcox,
J. R. Ballard,
Auditing Com.

On motion, the report was adopted, except that part which conflicts with report of Committee on Secretary's report.

REPORT OF SPECIAL COMMITTEE ON BILL OF DR. DANIELS.

Your committee, to whom the bill of Dr. Daniels for hall rent for the meeting of the Society held at Norfolk, June 7, 1881, has been referred, respectfully submit the following report:

The bill is for $25, which was paid by Dr. Daniels, and the Society should in justice refund this amount to him. But the Doctor is indebted to the Society the sum of $16, for dues up to date, including those due at this meeting. We therefore recommend that this amount be deducted from the bill. Leaving a balance due Dr. Daniels of $9. And that an order for this amount be drawn on the Treasurer in favor of Dr. Daniels.

L. J. Abbott,
R. C. Moore,
Committee.

On motion, the report was adopted.

REPORT OF COMMITTEE ON STATE BOARD OF HEALTH BILL.

The Committee on Public Hygiene and Medical Legislation, of the Nebraska State Medical Society, respectfully submit the following report:

The Special Committee on Board of Health Bill, appointed at the last meeting of this Society, consisting of the following members: J. C. F. Bush, M. L. Hildreth, W. M. Knapp, A. S. v Mansfelde and H. B. Lowry, after adopting measures to familiarize the members of the profession throughout the State with the objects of the bill, and so far as possible, secure their aid in obtaining the support of candidates for election to the legislature, selected M. W. Stone, of Wahoo, as a special committee of one, to present the bill and secure its passage.

In a report submitted to this Committee, Dr. M. W. Stone stated that the bill as originally approved by the Nebraska State Medical Society, was presented by J. R. Ballard—member of the House—the bill being known as House Roll No. 86.

Another bill, known as House Roll No. 43, was introduced by the Homœopathic and Eclectic Medical Societies, largely copied from the bill adopted by the Nebraska State Medical Society, differing only in minor details, but demanding homœopathic and eclectic representation on the Board.

We found the House about equally divided on the two bills, that, in case our bill was pressed to a vote, it would be defeated.

We were asked for a consultation with the originators of House Roll No. 43, and granted it.

It was agreed to introduce a compromise bill, and House Roll No. 176, was the result. House Roll No. 176 passed to the second reading, and was made a special order. When called up, after a spirited debate, participated in by the friends of the bill and its opponents, the vote resulted in an indefinite postponement by a majority of two, several friends of the bill being absent on committee work.

While the defeat of the bill was an accident, we do not see how it could have been prevented.

Foremost among the reasons for the defeat of the bill are the following: Despite the energetic work of this Committee, and the resolution adopted at the last meeting of the Nebraska State Medical Society, where, by a unanimous vote, each member was pledged to give his faithful assistance to this bill, we could not secure the hearty co-operation of the profession throughout the State, in obtaining the pledged support of candidates for the legislature, previous to their election.

Further: There were members of this Society, who, so far from giving support to the bill, worked for its defeat.

Further: Section 33 of said bill, appropriating $5,000 to pay the necessary expenses incurred under the provisions of the bill, was an objectionable feature of the bill among the members of the House.

The Committee recommend, that should this Society deem it advisable to introduce before the next legislature, the within bill, Section 33 be so changed that the necessary expenses incurred under the bill be raised by a registration fee upon the physicians practicing throughout the State. J. C. F. Bush.

On motion, report was referred to Committee on Publication.

REPORT OF COMMITTEE ON SECRETARY'S REPORT.

Your Committee, to whom was referred the report of the Secretary, reports as follows:

First. In the matter of collection of delinquent dues, which, by resolution adopted at the last regular meeting, was placed in the hands of the Secretary, we would suggest, in order to simplify the management of the finances, that this resolution be repealed, thereby relegating to the Treasury the custody of the funds and collection of the same, where, by constitutional provision, it rightfully belongs.

Second. We recommend that the resignation of Dr. A. J. Sanders be accepted, there being no reason why his request should not be granted.

Third. In the matter of delinquent dues, we suggest: That the names of those gentlemen who by communication to the Secretary, have refused to pay their back dues, together with those who have failed to return an answer to the Secretary's notices, when such delinquencies have extended over a period of three years, be dropped from the roll of the Society. We also suggest, that those gentlemen who have requested further time in which to liquidate their indebtedness, be granted until next annual meeting, when, if not paid, they will be dropped from membership, without further action of the Society.

Fourth. When a gentleman removes from the State, and at such time is delinquent in payment of dues, we suggest: If he fails to pay such dues, when notified of the same by the Treasurer, that he forfeit his membership. We consider it impracticable to follow him to his new home with notices to the different medical organizations of the State to which he may have removed.

Fifth. In reference to publishing the Proceedings of the Society, we suggest: That the Secretary be authorized to enter into agreement with the publisher of the Omaha Clinic to have the proceedings published in that journal, and that the publisher be required to furnish to each member of this Society in good standing, a copy of such Proceedings, bound in cloth. And as compensation for such work he be allowed not to exceed $300. He shall furnish fifty extra copies of the Clinic to the Corresponding Secretary, and one copy to each member.

Sixth. We suggest that the Secretary have printed a revised list of the members, with their postoffice address, and that he mail to every member a copy.

Seventh. In reference to the communication from the Committee of Revision and Publication of the Pharmacopœia of the United States of America, your Committee does not consider itself competent to express an opinion upon the best methods to be adopted in arriving at the proper strength of the different pharmaceutical preparations, and we suggest, only, that some system be adopted by which the same articles manufactured by the different establishments shall be of uniform strength and dose.

Eighth. The itemized statement of the expenses of the Secretary's office, during the past year, shows that $135 99 has been expended by this official, when only $100 was appropriated for this purpose at the last meeting. We suggest that $35 99 be appropriated to meet this deficit, and, furthermore, that this officer be instructed in the future to confine the expenses of his office within the appropriation set apart for this purpose. The amount of $10, which is placed on the credit side of this statement, as having been received from Hamilton County Medical Society, should be handed over to the Treasurer. There is nothing in the Secretary's report showing that such disposal has been made of this money.

The portion of the Treasurer's report referred to this Committee, namely: The best and most practicable way of treating delinquent members and the collection of delinquent dues, has been fully treated of in the report on the Secretary's report.

All of which is respectfully submitted.

Chas. Inches,
L. J. Abbott,
R. C. Moore,
Committee.

On motion, the report was tabled.

On motion, the report was taken from the table and considered article by article, and adopted as a whole.

An appropriation of $25 99 was voted, to refund to the Secretary, that amount having been expended above appropriation for the past year.

Also $100 for use of Secretary for the coming year.

Also $8 50 in favor of the Treasurer for current expenses for past year.

Moved and carried that the Treasurer be authorized to procure needed book, and draw on the Society for amount expended for same.

REPORT OF COMMITTEE ON NECROLOGY.

It becomes our most painful duty to report the loss by death, of two of our most illustrious members, during the past year: R. R. Livingston, of Plattsmouth, and J. H. Calkins, of David City.

At the request of the family and with the consent of your committee, Dr. Mansfelde will read obituary notice of Dr. Livingston.

N. F. Donaldson,
J. Theo. Miller,
Committee.

Robert R. Livingston, M. D.

"I miss from these gatherings many a voice now hushed forever, and, no doubt, as time with his downy touch, chills the last second of the next twenty years, some among you will miss a few more of the pioneers of your organization; they will have laid down to rest from their labors, with their heads pillowed in eternity. But their works will live after them, and the generous tribute of regret and sorrow and respect, for those who have gone before, will be freely offered to *their* memories then, just as we now recall the broad-hearted kindness and sympathy we always met from our whilom associates, who have been called to a higher sphere."

Did he, who uttered these words, have a prescience of his own departure from our midst? Who shall tell? Yet is it not true that his great heart had sympathy and kindness for every one? Did not the hand of the hero, gentle as a woman's, bind the wounds, which his strong right arm smote upon Southern battle-fields? Did not friend and foe alike bless the kind physician after the carnage of the day was done? A soldier and a physician, a citizen and a man; whom does this measure fit among us? His place is empty—yet he fills our hearts, with sorrow for his absence, with a resolve to deserve his hearty welcome, upon the other shore. I need not praise him—his panegyric re-echoes from all your hearts, when your memory recalls the founder of this Society—General Robert R. Livingston, M. D.

Do you recall his manly figure, standing behind me with his hand upon my shoulder, facing the large banquet hall filled with physicians and ladies and gentlemen, delivering his oration upon the occasion of the Twentieth Anniversary of the Nebraska State Medical Society, uttering these words, the last, most of you, ever heard from him: "Give place to the physician, for the Lord has created him; let him not go from thee, for thou hast need of him."

We had need of him, yet he left us, on Friday, September 28th, 1888, after a short illness; death being caused by failure of the heart, as the result of acute hepatitis and gastro intestinal catarrh.

Dr. Livingston was born in Montreal, Canada, August 10th, 1827, and located in Plattsmouth in 1859, and in 1861 organized Company A of the First Nebraska Volunteers, and by gallant services at Donelson and Shiloh was promoted from captain to lieutenant-colonel, and when General Thayer received his brigadiership was appointed colonel. He fought subsequently at Cape Girardeau, bringing reinforcements to the regiment that fought Marmaduke, and saved the day. He commanded the districts of St. Louis and of Northwest Arkansas, and at the latter position repulsed General Shelley at Batesville. After the war he commanded the district of Nebraska on the plains, and shortly afterwards, in 1866, he was mustered out with the brevet rank of brigadier general.

In his civil life he was honored with the mayoralty of Plattsmouth for three terms, has been President of the State Fish Commission and was also Surveyor General of the State. Professionally he stood very high and was at the time of his death Chief Surgeon of the Burlington & Missouri River Railway. In the Masonic fraternity he was Past Master of Plattsmouth Lodge No. 6, Past High Priest of Nebraska Chapter No. 3, Past Commander of Mt. Zion Commandery No. 5, Knights Templar, and Past Grand High Priest of the Grand Chapter of Nebraska. Politically he was a Democrat, and was several times the candidate of the party for Congress. He was last nominated for this office some six years ago. He was a charter member of the Nebraska State Medical Society, was its president at one time, and for several years was its corresponding secretary. He was at one time Professor of Principles and Practice of Surgery in the Omaha Medical College, and subsequently held the same chair in the Medical Department of the Nebraska State University. He was greatly respected as a citizen and as a physician and a soldier.

The funeral was held on Monday, October 1st, at 2 p. m., in St. Luke's Episcopal church, and was under the auspices of the lodges and chapter of the Knights Templar. Dr. Livingston leaves a sorrowing wife and six children, four sons: Dr. Theodore P. Livingston, Dr. Robert R. Livingston, Jr., Stewart and Guy. Also, two daughters, Misses Anna and Janet.

Mr. President, I conclude my sad duty, by moving, that this weak tribute to our departed associate, be inscribed upon the minutes of our Society, and that a copy be furnished to the bereaved members of his household, and finally, that this motion be sustained by a standing vote.

The Society by vote, instructed the Secretary to draft suitable resolutions, to be spread upon the records and a copy to be forwarded to the family of the deceased.

WHEREAS, Our ranks have again been invaded by the hand of death, and one of our respected and truest leaders removed, be it

Resolved, That while we bow in submission and sorrow, we remember that our loss, is his rest, and gain.

Resolved, That the sympathies and condolence of the Society be extended to the family in their hour of sorrow. We feel, that in his death, we, too, have sustained a loss, which words are impotent to express.

Resolved, That these resolutions be spread upon the records of the Society, and that a copy be forwarded to the family of the deceased.

M. L. HILDRETH, Secy.

Done at Kearney, May 23, 1889.

Moved and carried that the report be adopted, also, that appropriate resolutions be spread upon the records of the Society, and forwarded to the family of the deceased.

The resignation of Dr. Mansfelde, as Secretary, was tendered and accepted.

Dr. Hildreth elected as Secretary pro tem.

Moved that the thanks of the Society be expressed to Dr. Mansfelde for his faithful and efficient services in the past.

Carried unanimously.

Beatrice was chosen as the next place of meeting.

The following officers were elected for the coming year and installed.

President,..............................Dr. J. C. Denise, Omaha.
First Vice-President,.........Dr. D. A. Walden, Beatrice.
Second Vice-President, Dr. G. L. Humphreys, Kearney.
Recording Secretary,.........Dr. M. L. Hildreth, Lyons.
Corresponding Secretary, Dr. L. A. Merriam, Omaha.
Treasurer,........................Dr. W. M. Knapp, Asylum.

The following papers were read and referred to committee on publication.

By Dr. Merriam—"Jugulation of Acute Disease." Discussed by Drs. Knapp, Mansfelde, Carter, Denise, Lane, Whitten and Summers, Jr.

By Dr. Hildreth—"A report of an Epidemic (local) of a Nondescript."

By Dr. Mansfelde—"The Present Aspect of Inoculation and Vaccination, for the Prevention of Disease." Discussed by Drs. Gifford, Summers, Jr., Coffman, Merriam and Bridges.

By Dr. Bullard—"Typhlitis and Perityphlitis, with Report of Cases." Discussed by Drs. Butler, Summers, Jr., Coffman, Hildreth and Jonas.

By Dr. Somers—"Concussion from Explosion of Giant Powder."

By Dr. Henry—"The Best Treatment of Epithelioma." Discussed by Drs. Coffman, Bridges, Hildreth, Butler and others.

By Dr. Jonas—"Operative Treatment of Coxitis, with specimens." Discussed by Drs. Mansfelde, Summers, Jr. and others.

By Dr. Summers, Jr.—"Observation on Some Modern Surgical Procedures."

By Dr. Inches—"Report on Progress in Obstetrics."

By Dr. Benton—"A Case of Atresia Hymenalis, with Menstrual Retention."

By Dr. Butin—"Vaginitis in a Child—Membranous Dysmenorrhea. Report of Two Cases." In absence of author paper read by Dr. Mansfelde and discussed by Drs. R. M. Stone, Knapp, Mansfelde and Hildreth.

By Dr. Bryant—"Insufficiency of Ocular Muscles, as a Cause of Chorea and Epilepsy." Discussed by Drs. Denise, Mansfelde, Henry and Bryant.

By Dr. Gifford—"The Pathology and Treatment of Gonorrheal Conjunctivitis." Discussed by Drs. Hungate, Denise, Bryant, Bridges, Stone, Coulter and Gifford.

By Br. Harrigan—"Excision of the Neck and Condyle of the Right Inferior Maxilla, for anchylosis of the Temporo-Maxillary Articulation."

The following papers were read by title and referred to committee on publication.

By Dr. Whitten—"Report on Progress in Gynæcology."

By Dr. Merriam—"Report on Progress in Pathology."

By Dr. Milroy—"Report on Progress in Histology."

By Dr. Clark—"Report on Progress in Medical Jurisprudence, Medical Chemistry and Toxicology."

By Dr. Anderson—"Some Cases of Puerperal Eclampsia."

By Dr. Summers, Jr.—"An Unusual Product of Intrauterine Life," with presentation of specimens.

By Dr. Long—"A Case of Neurasthenia, with Active Cerebral Hyperæmia as a Prominent Factor."

By Dr. Clark—"My Malpractice Case, and what Became of it"

By Dr. Summers, Jr.—The Removal of Foreign Bodies from the Larynx."

The Society held its last session on Thursday evening, in the dining hall of the Midway hotel, where a sumptuous banquet was spread by the citizens of Kearney.

Dr. Lane, the retiring President. delivered his address which was referred to the committee on publication.

ADDRESS OF RETIRING PRESIDENT, DR. MILTON LANE.

Members of the Nebraska State Medical Society:

The centennial year of our government and the twenty-first annual meeting of our Society, bring vividly before us a retrospective view, with a prophetic vision of the future that is pleasing to the lover of his profession.

A half century ago, the element of mystery and the spirit of credulity pervaded medical knowledge so intimately that escape from their sinister influences seemed almost impossible, but there has been a perpetual and unceasing effort to enlighten ignorance and to interpret obscurity, until science has sorely shaken the foundations of many time-honored delusions.

Exact observation has taken the place of speculation. Predictions can be made without the shadow of a doubt that definite consequences will follow a given lesion. There are maladies which can be prevented or stamped out, as certainly as the waters of a stream can be dammed by an engineer.

The aim and endeavor of the present day is to perfect preventive and prohibitory measures which shall exclude or annihilate disease; which shall render many surgical operations unnecessary, or where inevitable, shall eliminate from them the extraneous and accidental complications, which not only check the processes of recovery, but imperil life itself. The success of these efforts has rescued our labors from the domain of chance, and favorable results are insured, in medicine as well as in surgery, under circumstances which were heretofore invariably attended by failure.

The study of the phenomena of life—and therein lies the whole of science, so far as the business which engages our attention is concerned—has exercised a good influence in promoting truer estimates of disease and wiser methods of treatment, but a just and natural proportion should be maintained between that part of our pursuit which is purely scientific, and that which is practical. If one is in danger of being prosecuted at the expense of the other, it ought not to be the latter. The lack of practical knowledge on the part of a physician, otherwise profoundly learned, may cause an immense amount of suffering.

A marked feature of the present day, in medicine as in other things, is the tendency to specialization in study and in practice. The rapid accumulation of facts in all departments of medical research is beyond the comprehension of a single mental grasp. Old fashioned practice—that is to say, the practice of fifty years ago—looked on specialism as an innovation of doubtful respectability. To-day, the assumed right to deal exclusively with diseases of special parts of the body, is no longer regarded as presumption or a violation of ethical rules. It is also asserted that the empire of the general physician and surgeon is crumbling away. There can be no denial of the fact, that whoever, in addition to his general acquirements, knows more about some particular pathological condition than any one else, or can do some special work pre-eminently well, has a decided advantage over his fellows; but the suggestion that all diseases of the body, and not merely those of its inlets and outlets—even though they are beyond the reach of mirrors, aspirators or sounds, must be put in the category with ailments of throats and ears, and reveal their secrets hereafter only to the sharp observation and skilled insight of specialists, is one which will hardly be conceded at present. The human body is made up of parts and functions so thoroughly inter-dependent, that it cannot be parcelled out into defined and isolated regions, and he who has the most comprehensive knowledge of the human organism and its disorders, is the best able to determine what is the matter with any given part of it, and so to help the patient to recover, either through his own skill, or his ability wisely to select the colleague, whose attainments may permit him to deal more wisely with the case than he can.

Accurate and familiar acquaintance with the applied laws of the latest medical learning, is required in these days, as a part of the most limited professional outfit. The merest practitioner equips himself with this resouce in the same matter-of-fact way that he buys a thermometer or a stethoscope. But skill in diagnosis will always remain the important part of a physicians business. Diagnostic skill may not carry with it skillful management of diseases, yet therapeutical skill requires the practitioner to be a skillful diagnostician. There can be no rest to professional endeavor until the nature, cause and remedy of any diseased state are settled beyond reasonable intelligent dispute. This time may be far off, but the effort of the human intellect finds prospective rest, only at that period.

One of the objects of this Society, is the promotion of all means "to improve the health and protect the lives of community." In furtherance of this purpose, this Society has heard addresses, passed resolutions and appointed committees with reference to a State Board of Health, for years. Not much has apparently been accomplished by their means, beyond arousing a gradually increasing interest in the subject. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but entrusts the care of its health and the lives of those who are nearest and dearest to it, to almost any one who announces himself as prepared to take charge of them. Want of information and the consequente indifference of the people, and the hesitency of the law making power to enter upon untried fields of administrative work, have so far prevented the accomplishment of much in this direction. In view of the increasing density of our population and the greater complexity of our social employments, involving constantly growing intensity of disease-fostering conditions, this laxity and want of prudence, in not doing what can be done to anticipate wide wasting disease waves, is discreditable and unwise. Disease, considered only from a financial point of view, is one of the most expensive and wasteful directions in which imperfectly organized society is taxed for its carelessness and ignorance. It is clearly urgent that an organized effort should be made to accomplish all that can be accomplished in the direction of the prevention of disease, and as rapidly as scientific study of disease and the laws of its origin enabled further advances to be made in their systematic prevention, the lawful authority should be empowered to make them, and the State should be willing to expend the necessary money to secure to its inhabitants, in the way of disease prevention and disease extinction, all that modern sanitary science can suggest.

Meanwhile, it is our duty not to allow discouragement to relax our endeavors in behalf of those who do not appreciate, as we do, the necessity for efforts to prevent disease. We must not cease our labors as a body, until the citizens of this State realize the importance of pure air to breathe, pure water to drink, and unadulterated food; to live in houses that are not sources of infection to themselves or to their neighbors, and have an intelligent body of agents to warn and protect them from preventable, indigenous and importable causes of disease.

This Society should use all honorable means to encourage the physicians throughout the State, to establish County Societies, as auxiliaries to the State Society, and to make such Societies the recipients of the best intellectual efforts of their members, asking that when a member of a County Society presents anything of especial interest, whether it be the result of original investigation, the rehabilitation of old truths in such new garb as to make them equal to new truths, or the report of instructive cases, it be sent to the State Society for the edification of its members, and to be printed in the Transactions for more general information and wider usefulness. By which judicious course of action, this Society may render County Societies popular, useful and indispensable to every doctor's welfare.

The art we devote our energies to, whose province is to heal and to save, has never been able to protect its own ranks from the inroads of disease and death. Since our last annual meeting, two of our associates have passed to the other side of death, and their toil is ended. Never more will their slumbers be disturbed at the cry of pain. Never more will they have to face the blinding storm. Never more will they sit in anxiety over their patients. Their work is done, and let us hope that they have at last found that rest which neither summer nor winter, day nor night, had granted to their unending labors.

I did not have the pleasure of a personal acquaintance with Dr. Calkins, of David City, but his sad and untimely death awakens the deepest emotions.

Those of you who attended our banquet at the Opelt Hotel, upon the conclusion of our meeting last June, will vividly remember the splendid physique of Doctor Livingston, of Plattsmouth, one of the founders of this Society, who, in an address, charmed us with its history from its formation to that period. To speak of him at all worthily would require a history of his professional success, won by toil, patience, good sense, force of character and pleasing manners, "in a straight, up-hill ascent, without one breathing space, until he sat down, not to rest, but to die."

The customary expression of thanks was tendered by the society to the Committee of Arrangements, to the medical profession of Kearney, and to the citizens of Kearney, for their untiring efforts to make our meeting successful and our sojourn pleasant, also to Dr. Lane, for the dignified and just manner which has characterized his presiding over our deliberations, and the railroad companies for reduced rates. Society adjourned *sine die.*

M. L. HILDRETH, Secretary.

MAY 23d, 1889.

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INTUSSUSCEPTION: ITS DIAGNOSIS AND TREATMENT.*

By DR. W. O. BRIDGES, Omaha.

Cases of Intussusception terminating in recovery are sufficiently rare to warrant my presenting the following experience with some remarks on the diagnosis and treatment of the affection, for your discussion.

A few months since I was summoned to see a male child, aged twelve months, and obtained this history: He had never been ill previously, but was of constipated habit, frequently requiring assistance, which was rendered in the occasional use of Castoria. He was still at the breast and his diet had not extended beyond reasonable limits, with the exception of a part of a banana, which his mother had at times allowed him. On the 23d and 24th of the month he ate a whole banana each day. The evening of the 24th he awakened at ten o'clock with some pain and was restless and fretful all night. The pain continuing next morning and appearing paroxysmal in character, the mother gave him two teaspoonfuls of Castoria, in hopes to relieve the colic. At noon there was no effect from the medicine, and she gave him a teaspoonful of Syrup of Figs. Colicky pain and straining continued during the afternoon when she gave him an enema, which was followed by a fecal passage containing mucus. No relief ensued and I was summoned 7 P. M. The child was moaning and cried out in paroxysms of pain, drawing the legs up and straining. The abdomen was slightly distended. There was some rigidity of the abdominal muscles. The pulse was 130, and no fever. There had been no vomiting. No action of the bowels had occurred in forty-eight hours, except the one before referred to, which followed the emena. I prescribed paregoric, ten drops in essence of peppermint, to be repeated half hourly until pain was relieved. At 6 A. M. of the 26th the child had slept only at intervals. He was still having a great deal of pain, with tenesmus, and he had had three passages of stringy mucus, containing dark colored blood, since midnight. There was no fever, pulse 140, anxious expression, expiratory moan. The abdomen was still distended and hard, and seemed more tympanitic and distended about the umbilicus. There had been no cough and the lungs were free. Passes water freely. I advised the paregoric continued in increased doses and hot flaxseed and mustard poultices applied to the abdomen. At noon of the same day there was no change excepting pain was less severe and the child was somewhat drowsy. He had nursed irregularly. I now administered an enema of about twelve ounces of warm water with the hips raised, kneading the abdomen while the water was retained. In fifteen minutes the water was returned, containing a large quantity of shreddy mucus but no fecal matter. At 7:30 P. M. there was no improvement and I repeated the enema of water with turpentine added. In ten minutes this was returned with shreddy mucus in less quantity. Still no fecal matter. An examination with the finger in the rectum reveals nothing abnormal. He has less pain but shows the effects of paregoric.

The morning of the 27th the pulse was 140, no fever, no moans and strains. The region of the umbilicus is much more distended than elsewhere and more prominent, while the right iliac region presents slight dullness of percussion and appears sunken as compared with the distended area of the left. (In reading up this subject at the time these notes were taken, I found this condition referred to by some author as being highly diagnostic of Intussusception. It was known as the "Sique de Dance," after the first author who called attention to it. I have never seen it referred to elsewhere.) There had been no passage or vomiting. I could find no well defined tumor. I now explained to the parents the seriousness of the case and determined to make one more effort with an enema, failing which I asked for a consultation with a view to laparotomy should my diagonsis of Intussusception be corroborated. On returning at one o'clock the child's condition was found unchanged. There had been continued paroxysms of pain and tenesmus, rendered less acute by the paregoric, and giving way to a semi-stupid state. The abdominal distension was still marked and the "Sique de Dance" was more decided.

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*Read before the Medical Society of the Missouri Valley, March 20, 1889.

An examination with the index finger well up the rectum gave negative results.

The child was now placed on the bed and an enema of twelve to sixteen ounces of warm water administered slowly, with the hips raised. This was retained with a napkin pressed tightly against the anus. The legs were entrusted to an assistant who was directed to maintain the body in almost a perpendicular position, with the shoulders resting on the bed, while I began a kneading of the abdomen with the disengaged hand in the reverse direction of the descending and transverse colon and downwards into the right iliac fossa. This movement was continued with considerable force for from five to seven minutes, when a decided gurgling was heard and some of the water escaped by the napkin, distinctly colored with fœces. In a short time he was placed on a chair, when five or six ounces of water were passed containing soft yellowish fecal matter and considerable mucus. Following this he slept for an hour when he awakened and had a large fecal action. From this time the pain ceased and after a few hours of sleep he was bright and playful, his recovery being uninterrupted. Two or three loose passages occured by the following morning.

I have gone into the details of this case for the reason that two of the most prominent symptoms of intussusception, vomiting and a tumor were not present, at least the latter was not discovered, and as these are considered highly diagnostic by most authors, especially in children, I might have had some misgiving about my diagnosis, had it not been for the result obtained by the means resorted to after my previous failure to secure an action of the bowels. The diagnosis of intestinal obstruction is one of the most trying problems which the practitioner is called upon to solve. It is the rock on which many reputations founder when the truth is known. So varied are the causes of obstruction, and so different and imperative is the treatment of the various conditions which give rise to it, that it behooves the physician and the surgeon to familiarize himself with the whole subject of intestinal obstruction, and not be content to make a diagnosis of simply intestinal obstruction, and calmly permit his patient to pass away under the quieting influence of opiates after having exhausted the whole list of cathartics.

Intussusception is the most common cause of obstruction in the child. Statistics show that one-half of all cases occur in those under ten years of age and one-fourth of all under one year, so that the younger the child the greater the probability of a given case of obstruction being due to this cause. The symptoms which together are highly diagnostic, are the passage of mucus and blood only from the bowels, severe paroxysmal pain with tenesmus, vomiting, which after a time may be fecal, abdominal distension, and the presence of a sausage shaped tumor. The only one of these symptoms which can be considered pathognomonic is the last, when it is found with obstruction, but it can not always be detected. One author states that it is found in only one half the cases. J. Lewis Smith reported a case to the New York Pathological Society a few years since, in which a thorough search failed to reveal a tumor, and yet at the autopsy the invaginated ileum and caecum were found deep down under the liver. It is important to examine for a tumor in all cases, the most common location being the right iliac region on account of the part which is generally invaginated.

Vomiting is referred to as a prominent symptom, but it is not at all essential to a diagnosis. Ashurst states that it is much less prominent in intussusception than in obstruction due to a band or diverticulum. It is much more apt to be developed after inflammatory symptoms have appeared. The passage of bloody mucus from the bowels is considered highly diagnostic, especialiy so in the child, and it was this symptom which led me first to suspect invagination in the case reported. The child had had three of these actions subsequent to the passage after the enema, which his mother had given him, and they were preserved for my inspection. They were entirely free from fecal matter.

In regard to this symptom, Hunter McGuire, in Pepper's System of Medicine, writes: "Diarrhœa with bloody mucoid stools is rarely ever absent, and is characteristic of invagination." Flint writes of it: "This is a highly characteristic symptom, and excluding dysentery, hemorrhoid, and polypus about the anus."

One would hardly confound dysentery with intussusception, as the history is vastly different. The value of this symptom is not so great in the adult. J. Lewis Smith stated that in nineteen recorded cases which he had between the ages of one year and twelve, in only six were they present.

The condition which was referred to in my case as the "Sique de Dance," was so marked that I was somewhat surprised at not finding it spoken of, except by the one author, who considered it so characteristic of intussusception. Its occurrence is explained by the accumulation of gas in the small intestine, almost all invaginations occurring at the ileo cæcal junction, and the escape of gas below this point being favored by the natural expulsive efforts of the large intestine, and the water enemata resorted to. This leads to a distension of the abdominal wall in the umbilical region, and a comparative depression in the iliac region. It is true that the same conditions might be developed by volvulus, but the location and relation would be different, as the seat of volvulus is generally at the sigmoid flexure.

An examination with the finger in the rectum in a certain proportion of cases will detect the lower part of the invaginated bowel and a diagnosis made easy. This should be done in all suspected cases. It is to be borne in mind that occasionally the invaginated portion remains pervious, when some of the important diagnostic signs will be absent, notably the "Sique de Dance," the obstinate constipation and vomiting. In these cases, however, the symptoms are much less acute.

In considering the treatment it is to be remembered that cures are effected by the unaided powers of nature in two ways: A visinvagination of the affected by the peristaltic action of the intestine, and by a "sloughing off" of the invaginated mass from the inflammatory process at the constricted part. The latter rarely occurs in the child, and is not very uncommon in the adult. I remember to have seen ten inches of the small intestine which was passed by an adult on the eighth day, the case terminating in recovery. It was reported to a society at my former place of residence.

The treatment of Intussusception to be available, whether medical or surgical, must be resorted to early, and hence a diagnosis is all important, as the results of treatment are successful in proportion, as they are adopted prior to the formation of adhesions between the serous surfaces invaginated. It has been shown that this occurs about the third day, the adhesions becoming firmer, of course, each day. What is true of danger arising from cathartics in all other causes of acute obstruction, applies with increased importance to a case of intussusception. As a rule, several doses of purgative medicine will have been given at the time the physician is summoned, and there being no effect from this, obstruction should at least be suspected and efforts to produce an avacuation made by means of enemata. For the relief of pain opium is called for and should be administered in quantity sufficient to relieve. The injection per rectum of water, air or gas, for the restoration of the invagination has been resorted to since the days of Hippocrates. The success of this method has been demonstrated time and time again. Authors differ concerning the respective merits of water and air or gas. Smith reports a case of rupture of the intestine from the latter, and two or three similar experiences were reported at a discussion of this subject before the New York Pathological Society.

However, on the other side, cases of success are reported from the use of gas in which water had been unsuccessful. Injections of water should be aided by gravity, with the hips considerably elevated, and the quantity used governed by the distension produced and the feelings of the patient, if an adult. I have described the details of the treatment in the case reported and wish to draw attention to the difference in results obtained, my first two injections not having been given with sufficient thoroughness of detail. I question if an anæsthetic would not be of great assistance, especially as giving an opportunity for a more thorough massage of the abdomen. A repetition of the injection is advisable, if not successful, and hope should not be given up until several trials are made.

Drs. Church and Warren reported a case in the *N. Y. Medical Journal*, some years since, in which two injections on the third day failed to relieve, and one on the fourth succeeded. In my own case it will be noticed that the third relieved on the third day, although it is admitted that the first two were not sufficiently thorough. If these means fail, inflation may be used. This has been accomplished by the ordinary air bellows, and with success, but carbonic acid gas may always be obtained and is much preferable More care is necessary in this method than by the water injections. Finally if medical treatment be unsuccessful, laparotomy is to be considered. In the adult there can be no question that this operation is called for when it is manifest that the symptoms do not warrant a hope that the patient may survive the sloughing process. To give a chance for success it must be performed before adhesion has occurred, although in the adult the establishment of an artificial anus might accomplish a good result if a reduction of the mass be found impracticable. In the child this has never been successful, so far as my reading goes.

Ashurst doubts the advisability of laparotomy, as the mortality of all cases taken together is 73 per cent, whereas after this operation it is 75 per cent. Undoubtedly the greater general success with the operation of laparotomy itself now obtained will change these figures. Hunter McGuire, in Pepper's System, refers to forty-three cases of laparotomy for invagination of which thirteen recovered and thirty died. In the *N. Y. Medical Journal*, Sands tabulated twenty reported cases in which seven were cured. In this article he reported one operated on by himself with success. The child was six months old and the operation was performed eighteen hours after the attack began, after other means had been only partially successful. He states, however, considering the gravity of the operation, that it is doubtful whether future statistics will show so favorable a result of laparotomy for this displacement as to justify the frequent use of the knife.

Finally, if medical treatment fail and an operation be refused, pain should be relieved by means of opiates, hot poultices applied to the entire abdomen and the powers of life sustained by food and stimulation in the hope that nature will effect a cure by the sloughing process. In such cases where vomiting is a distressing symptom, lavage of the stomach by the syphon method is advisable.

DISCUSSION.

Dr. A. F. Jonas.—Perhaps there is no question so interesting, and at the same time which involves so much doubt and so much difficulty in diagnosis, as the question of obstruction of the intestinal canal. We can in the majority of cases only make a probable diagnosis. In intussusception particularly, it is very difficult to make an exact diagnosis, for in this affection we have largely to deal with young subjects, where the abdominal walls are covered with more or less adipose tissue, making it difficult to feel anything through the walls of the abdomen. In this class of cases there is a great deal of distension of the bowels. By far the largest majority of intussusceptions take place at the ileo-cæcal junction, the ileum becomes crowded through the ileo-cæcal valve into the colon, and if the case is seen early, it is comparatively easy to make a diagnosis, yet it is often difficult to distinguish it from perityphlitic trouble. In cases where the tumor is well defined we may be able to make a certain diagnosis, but generally a probable diagnosis is all we can make. As to the pathology and etiology of this class of cases, we know but little. As to its pathology, we usually find one portion of the intestine has been telescoped into another, with congestion and constriction principally of the upper end; the intussusceptions becoming constricted on account of circulatory disturbances, and unless prompt action is taken early, we can expect no success except from surgical means. The methods of injection either of water or gas are not without danger. Dr. Senn, of Milwaukee, in his experiments upon animals has proven in connection with his experiments upon rectal insufflation of hydrogen gas, that in intussusception it is almost impossible to inject a sufficient amount of water into the colon to force it beyond the ileo-cæcal valve without injuring the coats of the intestine. In a large number of experiments upon animals, when the colon was filled with water for the purpose of seeing whether it would pass beyond the ileo-cæcal valve, it was found that when the colon became distended to a degree where the water passed in a fine stream through the ileo-cæcal valve, if the animals were killed immediately, some of the coats of the colon were injured, which would undoubtedly have resulted in peritonitis and death. I think in many of these cases it becomes a question whether or not death has not been hastened by therapeutic measures. We have only these two means—gas in some form or water, and they must be used early, because we frequently see in cases which have existed forty-eight hours that the adhesions have become so firm that it is impossible to reduce the intussusception without injuring the coats of the intestine.

Of course, when these means fail, the only resort is surgical interference, and there are a number of precedures we might adopt.

The first one, and the one which promises the best success is intestinal anastomosis, that is, taking the ileum and making a longitudinal incision on one side and bringing it down to the colon immediately below the intussusception, making a similar incision on that side the colon and bringing the parts together with bone plates, as has been done by Dr. Senn. In forty-eight or thirty-six hours the ligatures become dissolved, the plates drop into the intestines and are either passed away or become absorbed. This operation can only be performed when gangrene has not taken place. If gangrene has taken place, it becomes necessary to resect the intestine. In resection of the ileo cæcum we find a great difference in the calibre of the ileum and colon, and it is difficult to unite the end of the ileum to the resected end of the colon; in this case it has been recommended to sew up the end of the colon and the end of the ileum, and bring the intestine together by what is called intestinal apposition, bringing the intestinal surfaces together and fixing them with perforated bone plates, or by sewing up the end of the colon and making an incision along the side of the colon on its convex surface, bringing the end of the ileum down to this incision and stitching it with Czerney-Lembert sutures. In the light of late developments, these operations promise a great deal of success. At least the experiments upon animals have been uniformly successful. I have had the privilege of seeing some of these experiments performed by Dr. Senn on animals, where he made an artificial intussusception of one portion of the intestine, and then performed his operation of intestinal onastomosis, and they were uniformly successful; in fact there was very rarely a failure. But just how far these operations would be successful on human beings is undetermined, because the light Dr. Senn has given on the matter is of so recent a date that there has been but little opportunity to verify his operations. Another operation which has been performed is the establishment of an artificial anus, but the patients have almost always died, and the operation has not found its way into the profession generally.

Dr. Knott.—I do not think the paper, which was read, leads necessarily into abdominal surgery; it seems to me it is more particularly along the line of diagnosis and treatment prior to the surgical. And what I have to say upon the paper will be in that line. I would not say anything, for I can add no light to the paper, except, for one reason, and that is, in reference to the dangers of the treatment usually pursued in these cases. For my part, I have rarely been able to satisfy myself perfectly in these cases of intestinal obstruction, and have worried more over these, than any other class of cases, because of the uncertainty in diagnosing them. From consultation with my brethren, and my experience with these cases, I must say, that I think we are at sea as to its actual, precise condition, as has been stated here this morning. Of course, that being the case, we are in rather an unfortunate situation. I am sure I have seen a great deal of harm done by medication in these cases, and I have tried in my practice, to avoid doing harm by medication, especially from forcing a passage of the bowels. And the rule I have laid down for myself, whether or not I know the exact condition, is to absolutely control and prevent muscular contraction, and everything of that kind, by hypodermic medicines, and keep the patient perfectly easy. I have had a good many patients whom I have treated in this way, occasionally giving an injection, and they got well. While I am satisfied that if the ordinary method, of forcing and urging, by cathartic medicines, or an operation, the patients would have died. I think the very best thing we can do in these cases is to control the pain and spasmodic contraction. I think most cases of intussusception will be relieved by injections of morphia—carried to an extent that is safe—with an occasional injection, together with the other means usually employed to reduce inflammation, such as bandages, hot poultices, etc. With a correct diet, interdicting cathartics altogether, keeping the patient easy, with hot applications and an occasional injection, is the way I would treat such cases. And I am confident, provided you do not carry your anodyne treatment too far, that you cannot possibly do any harm by this line of treatment. All we can do, in many of these cases, is to keep ourselves from doing harm. This is my view of these cases, and I have spoken with a view to bringing out the point of avoidence of over medication in these cases, especially cathartics.

Dr. J. E. Summers, Jr.—The diagnosis of intussusception, and confounding this with perityphlitis, I think is a mistake that should rarely be made. I believe that perityphlitis is of rare occurrence among young children, and it is with young children we have to deal in this class of cases, although it does occur in adults as Dr. Bridges states. That intussusception is easier to diagnose than most other forms of obstruction not due to new growths, I think will be admitted, because we have the characteristic discharge of blood, a mucous discharge, and at times when the intussusception is great, a possibility of feeling the intussusception by passing the finger into the rectum, and perhaps even the whole hand. But we must remember, however, that intussusception does not always take place at the ileo-cæcal valve; it not infrequently occurs in the ileum itself, and in cases of this kind, treatment by injection would be perfectly useless, because the injection would not pass through the ileo-cæcal valve.

In perityphlitis we almost always find a local tumor; in intussusception this tumor may be movable, and its shape is different when it is felt at all. In intussusception we have an absence of fever, while in perityphlitis we have a slight fever, not as a rule higher than 102 Farenheit.

I can endorse the treatment of Dr. Bridges from beginning to end, and also the treatment of Dr. Knott, *i. e.*, to rest the gut, rest the patient with opium, and avoid cathartics. Only two weeks ago I was very much frightened at giving a cathartic in what I supposed was an ordinary case of colic and indigestion; later it seemed I had made a mistake, and that it was a case of obstruction. The patient had taken a teaspoonful of epsom salts every hour, but fortunately I had not made the mistake I thought I had.

In regard to the use of bone plates, which Dr. Senn advocates, so far as I am informed, I believe there has been but one successful operation in New York City where the bone plates were used. Dr. Abbe used the bone plates in making an apposition. As to the other methods, none have been tried, so far as I know, except upon dogs, and we all know that dogs can stand all sorts of operations. A dog's gut being several times thicker than a man's, is therefore much easier to work with.

Dr. B. F. Crummer.—I did not have the pleasure of hearing Dr. Bridges' paper, and do not know the points he made regarding the diagnosis of these cases. I think one cause of the trouble in diagnosing these cases is their comparative rarity. A man may be in active practice and not see a case of intussusception more than once in two or three years, or perhaps once a year. I can recall now three or four cases. I remember one case in a babe eight or nine months old, which occurred about a year ago last June. The child was taken about four o'clock in the afternoon; the attack was very sudden, the child became very pale and vomited. The mother, recognizing that something very severe was the matter, brought the child direct to my house. It had strained a good deal and the clothing was stained with blood. It had vomited several times along the road; and the pulse was rapid, and the child pale. It struck me at once that there was a severe intestinal obstruction, and on making a careful examination, I found a sausage shaped tumor about two and one-half inches long in the left side of the abdomin. I sent the child to some friends in the city where I could watch it carefully, applied ice over the swelling, gave small hypodermic injections of morphine, repeated them once or twice during the night and kept up the ice applications. Two or three times that afternoon (every two hours) I gave an injection of warm water, which did not accomplish anything. The next morning I used an injection of gas; not having an apparatus, I used tartaric acid and bicarbonate of soda, passing the solutions high up. The first time it did no good. After an interval of an hour or two I repeated it, had the satisfaction of seeing the child have a copious passage from the bowels, and the case recovered rapidly. I admit that I gave the injection of gas with some misgivings and with fear of the result, but in this case it proved to be very satisfactory. But I think in a certain proportion of cases we must be in much doubt as to the nature of this disease, especially where there is no distinct tumor. But if we keep in mind the rapid onset, the vomiting and bloody stools, the shock and rapid pulse, we can generally reach a correct conclusion. In one of the other cases the child died, injections having failed and the family refusing an operation. In the third, recovery took place after repeated copious injections of water. In this case the symptoms were very marked, including the passage of bloody serum, etc.

Dr. W F. Milroy.—I would like to call attention to a statement made by Dr. Summers. He stated that water will not pass the ileo-cæcal valve when injected into the rectum. This I believe to be a mistake. There is one very troublesome class of cases, chronic diarrhœa, which I have seen successfully treated by filling the patient full of water and washing out the intestine, and if the body is inverted, I am satisfied that water does pass the ileo-cæcal valve freely.

Dr. Thomas.—There are two cases come to my mind, one of which a gentleman of this society will remember, where olive oil was injected and was vomited up. The other a case where I used water in excessive quantities, not knowing the danger, it being early in my practice. I used 2½ wash dishes of water, and the patient vomited water, so I am satisfied that water and oil do sometimes pass the ileo-cæcal valve.

Dr. J. E. Summers, Jr.—When I say water does not pass the ileo-cæcal valve, I mean that is the result of experiments upon the cadaver in the hands of men, who not only tried it once, but a hundred times. And this has been tried recently by Dr. Senn and another gentleman (I don't recall his name), and although occasionally where there was some disease of the valve water would pass, still in the majority of cases it would not. I do not say it is not possible for it to pass, but that the result of all the experiments in this direction are that it will not. If I had a case of intussusception, and knew it was intussusception, I would try injections, hoping that the water would pass, but I say the chances are that it would not do so.

I might further remark that my idea in using injections was not to force the water through the ileo-cæcal valve, but for its mechanical effect.

Dr. Bridges, in closing the discussion, said: The question of differential diagnosis of intestinal obstruction, is, to my mind, one of the most important with which we have to deal. Only a few years ago most of these cases were not well known. We were satisfied to rest entirely upon a diagnosis of intestinal obstruction, and permit the patient to die. It is well known that this same condition of things existed in reference to the diagnosis of the various brain lesions, and that now, in cases, both of brain disease and intestinal obstructions, differential diagnosis is repeatedly and freely made. In cases of obstruction in children, I think it is always important for the physician to suspect intussusception, as this is the most frequent cause of obstruction in children, and I think you will all admit that when a diagnosis of intussusception is made early, the chances for saving life are much greater. This, of course,

applies to all intestinal obstructions, whether in the adult or child. I think that active interference is oftentimes beneficial, especially so if there is no harm from it, and there is usually no harm in the injection of liquids or gas into the intestines. Usually, we should suspect an obstruction early, and when we are not satisfied concerning the diagnosis, we should ask for assistance, because the subject is one of much importance, and we are apt to err. And when we cannot make a satisfactory diagnosis, treat the case with opiates and rest exclusively.

In speaking of the importance of diagnosis, how short a time ago it was when even good men were not making a differential diagnosis of these obstructions. I remember a case which occurred a number of years ago, where the patient was treated for intestinal obstructions, was given opiates and hot applications, and died; and in looking back on that case now, I have come to the conclusion that it was a case of perityphlitis. I speak of this to illustrate the change which has taken place in the mind of the profession in reference to differential diagnosis in intestinal obstruction.

In regard to treatment, one of the principal objects I had in bringing this case before the Society was to bring out the fact that in all cases of intestinal obstruction, or even suspected cases, we should refrain from the use of all forms of cathartics. This is one of the most important things in the treatment of abdominal trouble. We should recognize the fact, particularly in intussusception, that this will only increase the trouble, and ordinarily, when we are called to treat a case, we will find that various doses of cathartics have already been given. The physician should be careful not to increase the trouble, our efforts to evacuate the bowels should be throught the use of enemata, and if the case is one of ordinary fecal impaction, with temporary congestion, an enema will relieve and can do no harm.

EXHIBITION OF A CASE OF OLD DISLOCATION OF SHOULDER.*

By A. F. Jonas, M. D., Omaha.

I take great pleasure in introducing this case, because it belongs to a class of cases we seldom have an opportunity of discussing before medical societies. This is an interesting case because it is one we rarely meet. Dislocations of the shoulder joint are so easily diagnosed as to be recognized at once, and we very rarely have an old dislocation to treat. This young man, while riding a horse in one of the adjoining towns, was thrown, and fell, as he supposed, on his shoulder and arm. A physician was called, who discovered a fracture of the humerus at the juncture of the upper and middle third. Splints were applied, and union has become perfect, as we can feel the callous distinctly. The callous is very distinct, and union has been perfect. The case was referred to me by Dr. Jensen. Upon examination we found the head of the humerus immediately under the cora-coid process; the arm was flexed at a right angle, and this was the highest degree of flexion the patient could accomplish, owing to the tension of the triceps. The patient was put under the influence of chloroform, and long-continued efforts were made at reduction, which failed. The adhesion had become so firm under the cora-coid process that reduction of the head of the humerus was impossible. The patient was allowed to recover from the anaesthetic, and the nature of the case explained to him. He was told it would be absolutely impossible to reduce the dislocation without an operation. Eight weeks had intervened since the time of the accident. The patient was accordingly chloroformed, Dr. Jensen and myself being present; our assistant having disappointed us, we were compelled to operate without him, other young men about the house, on account of their timidity, refusing to assist us.

I first made an incision extending from the upper border of the glenoid cavity downward almost to the insertion of the deltoid, (the deltroid being atrophied almost to the extent you see it now) and it was found that the capsule had contracted so firmly, like drawing together a tobacco pouch, and was reduced to such a small capacity, it could not accommodate the head of the bone, it being reduced, perhaps, to one-fourth of its natural size; the capsule was entirely extirpated. Another incision was made almost directly over the head of the bone, cutting pectoralis major; the flap was turned back, and the adhesions gradually severed, which occasioned us great difficulty on account of the close proximity of the axillary vessels, which were closely adherent to the bone. We could feel, even after the bone was replaced, the blood vessels and they were closely adherent to the bone, and there was great danger of injuring their walls. After the adhesions between the head of the humerus and the coracoid process and ribs had been separated, the bone was replaced. Now the question arose whether we should cut off the head of the bone or leave it in the socket. After the bone had been replaced, I was afraid by cutting off any more of the bone it would be difficult to retain the end of it in the glenoid cavity, consequently did not resect as is often advised. The pectoralis major was carefully stitched with cat gut and the skin united with deep silk sutures and antiseptic dressing was applied. The whole wound healed per primam, with no elevation of temperature. The case now has progressed so far that there is quite a good deal of movement of the arm; he is able to move it back and forth, he dresses himself and can accomplish all ordinary work. The function of the deltoid is almost entirely absent, the cicatricial tissue in the joint preventing a perfect rotation of the arm, but his forward and backward motion gives him excellent use of it. We intend later to make a section of the cicatricial tissue between the end of the bone and the glenoid cavity and he may then be able to move the arm with much more freedom.

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*Before the Medical Society of the Missouri Valley, March 21st, 1889.

I might here mention an interesting point: The long head of the biceps had been torn away from the bicipital groove and I saw the bicipital groove free, and when the bone was reduced, the tendon was replaced in its normal position.

There are several points of interest in connection with these cases of irreducible dislocation. First, what are the hindrances to reduction? Evidently there was no attempt made in this case to reduce the dislocation, yet occasionally we see cases where it is impossible, even with the most approved methods, to effect a reduction. I have had no instances of irreducible shoulder dislocation myself. Nelaton refers particularly to the stretching of the upper part of the capsule, and the coraco-humeral ligament. These two, or rather these three structures (the upper part of the capsule, the coraco-humeral ligament, and border of the coracoid process), are the principal barries to reduction.

Another point in replacing the head of the humerus is, whether we ought to perform a resection, or replace the head in its capity. Some surgeons have laid down the rule, in elbow joints for instance, to allow the bones to anchylose after resection, but others say that should depend upon the occupation of the patient. If a laboring man, the bone should be allowed to anchylose, because he has more use of it than of a movable joint that is as liable to posterior flexion as anterior. If our patient has an anchylosed joint, the scapula will permit movement so that he can perform all ordinary labor. That is one reason I did not cut off the head of the bone. Even if he has an anchylosis, he is a laboring man, and will be able to use it to better advantage than a loose, movable and weak joint.

Nelaton has written quite an extensive treatise upon this subject, but I am unable to get his pamphlet. He gives as one of the reasons for irreducible joints, the contraction of the capsule. The capsule becomes so contracted in a short time as not to admit of reposition of the head of the bone. I am sorry I was not able to have access to a greater amount of literature, because this is a subject we see very seldom, and I think it would highly repay us could we have access to the literature on this subject, thus gaining the opinions of others.

Older surgeons advise subcutaneous sections, but I think it would be a dangerous proceeding to attempt subcutaneous sections in cases of this kind where the axillary vessels lie in such close contact to the bone and joint that we can scarcely help injuring either the veins or arteries in the axillary spae.

Another question arises in connection with the reduction of old dislocations and that is, after how long a time can we still reduce the dislocation? Can we lay down any particular rule? I think that would be a difficult thing to do. As you see in this case, after eight weeks we failed to reduce the dislocation, after employing all the means at our command. An old dislocation was, however, reduced four years after the accident. A man had fallen from his horse and dislocated his shoulder, and attempts at reduction were made without success. One day, four years afterward, while riding one horse and leading another by a halter with the injured arm, he was pulled off by the second horse and finding there was something the matter with his shoulder, he went home and sent for a physician, who discovered that his arm had been reduced. Here we have two extremes, and yet most surgeons lay down the rule that after the head of the humerus has been dislocated six months, it is exceedingly dangerous to attempt a reduction; but that will depend upon the age of the patient. With a young patient, where the blood vessels are pliable, we may attempt a reduction where, in an older patient it would be very dangerous, because frequently the arteries have been ruptured, and of course in case of rupture of the axillary artery death immediately follows.

I believe that is all I have to say in reference to this case and I submit it for discussion, hoping that I have been successful in presenting a subject which will elicit profitable discussion. You will observe in this case there is quite a degree of movement of the muscles. The pectoralis major and pectoralis minor both react and also the triceps and biceps. The deltoid does not react at all.

DISCUSSION.

Dr. Bridges.—I am not very familiar with the literature on this subject, but take it from seeing Dr. Jonas' case and his description of the operation and also of the result, that he has been very successful indeed and congratulate both the doctor and the patient.

A few years ago the late Dr. Peck sent for me to come to his office and on reaching there found a man forty-five years of age who had dislocation of the humerus of about eight or ten weeks duration. He was placed under the influence of chloroform and we worked about an hour and a half attempting to reduce the dislocation and failed. Dr. Peck advised him not to have anything done and in time his arm would become more useful than it was then, but he declined this advice and went to Chicage and had an operation performed in the Cook County hospital, and in about three days the man died; what he died from I don't know.

It seems to me, under ordinary circumstances, where adhesions have progressed to such an extent as to involve the blood vessels and nerves, it becomes a very serious question whether an attempt should be made at reduction by operation, for the reason that it is very probable that the blood vessels will be ruptured and of course this would produce fatal results.

I remember also another case of dislocation where a man's shoulder was thrown out of joint during an epileptic attack. The physician made a diagnosis of paralysis and did not recognize the dislocation, and after six or eight weeks the man turned up in Boston under care of Dr. Hodges, who recognized a subspinous dislocation of the humerus; an attempt at reduction was made which was only partially successful. They sent him home and he came under my care and I treated him for six or eight weeks, applying the faradic current to the muscles about the shoulder joint, and he came out with a fairly useful arm.

I think another point should be brought out in connection with this case and that is, that we are all liable to err; that we should examine the neighboring joints as well as the bone. In cases where we detect a fracture we are liable to think that it is the extent of the injury and reduce it, leaving something undone which should be attended to, and we should always examine the joint as well as the fracture.

Dr. J. E. Summers, Jr.—I would like to congratulate Dr. Jonas on the result of his operation. It is excellent; much better than nature could have done, and I presume in time there will be more extension of the joint and more rotation. The doctor suggested that such operations might be successful on a young person and not on an older one. I have been consulted several times by an ex-soldier upwards of forty years of age, and although both shoulder joints are dislocated, he gets along very well and has useful arms. As the deformity had existed for a number of years, I told him so far as an operation was concerned, it was entirely out of the question. This I think should be the rule to follow. If a young person, say under twenty, and the dislocation is not more than two or three months duration, I would advise some such an operation as Dr. Jonas has done here, but I believe after that length of time, the head of the bone and contiguous parts have accommodated themselves so as to make something of a useful member, and the risk of an operation would probably be too great.

Speaking about the length of time elapsing after dislocation when reduction is possible or advisable, I might say I had a case of a boy who was sent to me to have his leg amputated for disease of the knee-joint; this I found unnecessary. The boy had been to Chicago for treatment and while there walking on crutches, he fell in the street and fractured the femur and this was treated in a hospital. When he came to me seven weeks after the fracture, union had taken place and I found he had at this time a dorsal dislocation of the hip-joint, and although not thinking it possible to reduce the dislocation, I chloroformed the boy and succeeded in reducing it, but while making the reduction I refractured the femur. Still, I put the leg in an ordinary apparatus and obtained a good result. The dislocation is reduced and his leg is in good condition, and the knee-joint is doing well. This was between seven and eight weeks after the dislocation had taken place and the fracture and dislocation probably took place at the same time, when he fell on the sidewalk. I think this is an interesting case as illustrating the length of time after dislocation when attempts at reduction can be adopted with benefit.

Dr. B. F. Crummer.—The point in the etiology of the muscular atrophy that follows dislocation of the shoulder has not been mentioned; that is the trophic change or nutritive impairment of a muscle, when the nerve supplying it has been injured. A chronic form of neuritis supervenes and the muscular atrophy is very intractable. It may follow in cases where the head of the bone has been properly replaced. I have had one such case in which a man of seventy suffered from marked atrophy, after a dislocation of the right shoulder. The bony prominences about the shoulder were very marked, and the arm quite feeble. He went about trying to find some one who would say his joint was not properly reduced, and I came near having a mal-practice suit on my hands.

Dr. A. F. Jonas.—In closing the discussion said: I have but little to add to what I have already said. Dr. Bridges has suggested one very important thing and one which we too frequently neglect, I think, in all cases of fracture, and particularly of the elbow and hip-joint, i. e. an anæsthetic should be given, and the joint examined. We can make a more correct diagnosis if we have the patient completely under the influence of an anæsthetic. In all my experience with injuries of this kind I have administered an anæsthetic except in one case, and that happened to be the case where I ought to have done so. I made the examination hurriedly and did not have time. Afterwards it was a very difficult matter to convince the patient that all was right. In the case before us to day, if an anæsthetic had been given, probably the dislocation would have been discovered as well as the fracture, and this operation been avoided. In all injuries to the joint, it is more satisfactory to the patient and you can make a more satisfactory examination by giving an anæsthetic, and you can often clear up points in the diagnosis that would otherwise be overlooked. The point mentioned by Dr. Crummer, trophiatrophy of the muscles, I intended to have mentioned but forgot it. Once in a while, particularly the deltoid muscle, and in cases of dislocation of the hip-joint, there is no electrical reaction of the muscles at any time.

I presented this case to bring out the different methods of reduction of subcoracoid dislocations, but as nothing was said on that particular point, I will not refer to it.

HALLUX VALGUS.

By Donald Macrae, M. D., Council Bluffs, Ia.

This is a malposition of the great toe, superinduced by wearing improperly shaped or badly fitting shoes. A narrow-toed shoe, which is also too short and high-heeled as well, forces the great toe outwards. This condition gradually increases, partly by the shoe and partly by the weight of the body in walking, until finally the toe permanently remains slanting obliquely outwards. Then the foot has the peculiar appearance of the point of the great toe occupying a central position, the apex of an angle, the base of which is a line drawn across the foot at the metatarso-phalangeal articulations. Moreover, the phalanx is finally more or less completely dislocated from its articular surface, and the cartilage disappears. The other toes are compelled to occupy what space they can, and one or more toe is flexed to allow room for its neighbor. From pressure on the articulation, the point inflames and a callus developes or bunions form, and an amount of suffering and distress ensues which can only be realized by one in that condition.

In the normal foot, the great toe is in a direct line with the inner side of the foot, and when pressure is made by bearing the weight of the body upon the foot, the toe should point slightly inwards, and there is a distinct interval between the first and second toes. A tendency to hallux valgus is frequently seen in children, a shape of foot possibly transmitted by heredity from a long line of ancestors, who were compelled to wear the shoes of the period. In these cases the toe occupies a more and more oblique position as their years increase, until finally the case is fully developed as far as pain and position are concerned.

Many means have been devised for the relief of this condition; none for its prevention or cure except by surgical methods. The apparatus of Sayre is the most popular and most used, but it is only applied when the great pain and distress induces the sufferer to consult a surgeon, and then the wearing of the device is given up when temporary relief is obtained.

It was reserved for a practical shoemaker of this city to supply the treatment and prevent the condition in a much more practical and pleasant form, a form which can be permanent and which will give ultimate and permanent relief. The cure consists in the mechanism of the shoe itself. He makes a shoe with a separate compartment for the great toe, where it is kept in its natural position, and this without any change in the outward appearance from any ordinary shoe. The last is made as nearly as possible to correspond with the natural shape of the foot. In the toe of the last there is a recess of one inch and a half deep, for which a piece of sole leather is prepared for insertion. The toe of the shoe is what is known to the shoe trade as the crimped box-toe. The box is opened on the upper of the last and the insole on the bottom, both opposite the recess. The piece of sole-leather already prepared is inserted, now to become a partition in the toe of the shoe, and is securely sewed to the box on the top and the insole on the bottom. The rest of the shoe is made in the ordinary way. When made, and the last is withdrawn from the shoe, the piece of leather which was inserted in the recess becomes a partition in the toe of the shoe, forming a compartment for the large toe. This keeps the toe permanently and comfortably in situ and the relief obtained, is, after the lapse of a few day's use, astonishing.

A special sock or stocking, one with a separate compartment for the great toe, is also required with such a shoe.

The shoe is known by the name of the O'Neil Shoe and is protected by patent. I have no interest whatever in its manufacture and only write from a desire to acquaint the profession with a practical and permanent cure for this painful affection and for its prevention in the early stages.

MEETING OF OMAHA MEDICAL CLUB.

Held at Dr. Eleanor Dailey's residence, Friday evening, June 20, 1889.

A paper entitled "Chills—Their Nature and Treatment," was read by Dr. Gilmore.

The author of the paper took a strong stand against the extensive and indiscriminate use of quinine, and thought that it not infrequently caused chills; that it was capable of exerting permanent harmful influences of the nervous system, and that its use should be very greatly curtailed.

DISCUSSION.

Dr. Milroy—Did not agree with the reader as to the power of quinine to produce chills and thought that drug was a true specific for ague, and to be efficient must be given in full doses of 10 to 20 grains daily.

Dr. Somers—Gave as a maximum 10 to 15 grains daily in combination with opium and capsicum. He claimed that by combining the two latter drugs with the quinine increased its anti-malarial influence.

Dr. Carter—Believed quinine to be one of our best and safest drugs; there was very little danger from its use in reasonably moderate quantities. He believed that 10 to 15 grains daily was the maximum quantity required to control ague. He thought larger quantities than that were useless and harmful.

Dr. Mary Butin—(Dorchester, Neb.) favored the use of quinine in daily quantities of 7 to 15 grains, combined with opium and capsicum.

Dr. Mary Strong—Gave quinine and capsicum in ague, not to exceed 10 grains of the former daily.

Dr. Stone—Did not agree with the writer. He gave 30 grains of quinine per day.

Dr. Gifford—Said quinine hardly came within his line of practice—that of the eye.

Dr. Svenson—Had no opinion to offer on the points raised in the paper. He gave quinine in moderate quantities for chills.

Dr. Ross—Was in harmony with those who gave 10 to 15 grains quinine daily for chills. Did not know of such a thing as quinine chills.

Dr. Jonas—Agreed with the author in believing that the free use of quinine was often followed by a derangement of the nervous system, manifested by *chills*. Thought we ought to be more careful in its use, and that it ought not to be used so commonly by the laity.

Dr. Lord—Met with many cases of fever and ague on the bottoms and in north Omaha, to whom he administered 60 grains of quinine combined with capsicum in six hours, and repeated it the next day, making a total of 120 grains of quinine in forty-eight hours. He said that he never had any bad effects from the enormous doses, and that nothing short of these amounts would cure his patients.

Dr. Towne—Did not believe in such large doses of quinine. He thought that opium and capsicum with 10 to 15 grains of quinine daily would give the maximum results, and with safety. He did not take much stock in quinine chills.

Dr. Gapen—Said a chill was a nervous phenomenon, and might be produced by many disturbing influences on the nerve centers, and that quinine might so act as to cause chilliness by causing increased irritability of nerve centers.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.

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H. J. PENFOLD, PUBLISHER,
1110 Farnam St., Omaha, Neb.

OMAHA, JULY, 1889.

EXCISION OF THE HIP.

In reading over the latest, and in our opinion, the best in many respects, of the works on operative surgery (Jacobson's), we were particularly struck with the following: "The value of this operation, (excision of the hip) still remains unsettled. In spite of all the work done in this direction, there is no other operation of equal importance on which there is still such extreme difference of opinion, on the chief questions which have been raised again and again, viz: Does it save life? Does it shorten treatment? Is the limb a better one?"

In discussing these all important questions the author confines himself almost exclusively to the views of two of the best known and most experienced writers in England, Mr. Howard Marsh and Mr. G. A. Wright—the former a strong advocate for conservative and chiefly mechanical treatment; the latter believing in excision "as soon as there is any evidence of external abscess, and still better results would be obtained by operating before the pus has escaped from the articulation."

Now, recognizing the authority of these diametrically opposed counsels, each answering the propounded questions to suit his practice, and gaining no information of what should be our own practice; if we turn still further, and consult authorities elsewhere, the most natural direction would seem to be the source from which all that is reliable and scientific is believed to spring—Germany.

At the meeting of the German Society of Surgeons, held at Berlin last Spring, Krause reported two hundred and seventy resections of the hip-joint for caries done at Volkman's clinic, where early and radical operations are practiced—Volkman having made a complete change of base since the introduction of the antiseptic methods of operation. Many German surgeons are strict followers of Volkman, and the somewhat less radical Koenig. Most of these, however, belong to the very youngest enthusiasts, anxious, ambitious operators. A learned, experienced operator, and professor of the first surgical clinic in Vienna, acknowledges, candidly, that after an extended experience in both the early and radical operation, and, in the conservative treatment of hip-joint disease, that he is unable to give a positive opinion as to which will answer best, in the majority of cases, the questions asked by Mr. Jacobson, in his book above referred to, and says: "The question is to-day harder than ever, and we must observe the functional results *years* after operation before we can give a positive opinion:"

Prof. Ollier, of Lyons, at a recent meeting of the Academy of Medicine in Paris, declared that, although good functional results may be obtained by resection if done so soon as pus has formed around the articulation, yet "in many cases of coxalgia in childhood cures may be obtained by more simple operations than resection, such as antiseptic opening of foci, iodoform injections, drainage, etc." As Ollier is an acknowledged authority on bone and joint disease, his views should carry weight.

In America, where the best orthopaedic surgery is practiced, some surgeons (among them Judson) carry conservatism too far, advising non-interference with abscesses about the joint, believing many are absorbed. They forget the destruction almost sure to follow about the joint in spite of the rest given by appliances. Such practice, we take it, tends to increase the number of surgeons who would reply favorably to Jacobson's queries. We believe that most cases of hip-joint disease, if seen early, given good nourishment, fresh air and little medicine, will result in a cure if the joint is placed at rest. When suppuration has occurred, the use of the knife, sharp spoon, scissors and drainage tube, added to the above, will bring about a favorable result, and only failure after a fair trial, or neglected early treatment, would to our mind demonstrate the necessity for the radical operation. From personal experience and observation of the work of others in all the methods practiced, we are inclined to await further developments before changing our ideas. The early operation, unless the above indications are followed, does save life. It shortens treatment. The limb is a better one.

J. E. S.

QUININE.

At a meeting of a local Medical Society recently, the use of quinine as an antimalarial agent was very thoroughly discussed by about sixteen physicians. Of the sixteen present, thirteen placed the maximum daily quantity necessary to control malarial paroxysms at from 7 to 15 grs., two at from 15 to 30 grs. daily, while one frequently gave as much as 60 grains within the short time of six hours and repeated the same dose on the succeeding day. The latter gentleman states that he never had seen any unpleasant symptoms nor harm following these large doses of quinine. No one present seemed inclined to adopt such heroic measures in this locality where malarial miasm is of such a mild and amenable type without almost entire absence of malignancy or fatal tendencies, such a thing as a congestive chill being almost if not entirely unknown among us. We are strongly of the opinion that these unusual large doses of quinine are not only unnecessary for controling malarial toxæmia, but are certainly harmful and their employment, except in very rare instances, is unjustifiable. Fifteen grains of quinine daily is to be considered a maximum dose of this drug.

During the prevalence of typhoid fever last year in this city, several physicians were in the habit of giving 40 to 60 grains of quinine daily for two days in succession to abort a form of fever formerly called typho-malarial fever, but in which malarial symptoms predominated with a tendency to continue throughout a period of four to six weeks. They claim to have succeeded in cutting short the disease and aborting it in three to five days. To our certain knowledge many of these cases developed into typhoid fever and terminated fatally. We have no confidence in anyone's ability to modify the severity or cut short the course of a true typhoid fever. A remittent or intermittent fever is always to be attacked with full doses (10 to 20 grains daily) of quinine. A fever resisting this amount will fail to yield to any amount of the peruvian bark alkaloids.

JAMES CARTER, M. D.

THE Omaha Medical College will open its next session the 1st of October, under most flattering prospects. Inquiries by letter and otherwise, coming to the Secretary, indicate that there will be a larger class than usual. Young men intending to attend a course of lectures next winter, should make all their arrangements early in the season, which means that they should do it now.

THE article published in the March CLINIC on Woman's Dress, by Dr. Cleaves, has been highly complimented and much sought for. Letters have been received from all parts of the country asking for copies. Do our sisters really contemplate a reformation along this line? If they themselves set about it in earnest, it will be done.

IT SEEMS, after all, that we are not to have the publishing of the Proceedings of the Iowa State Medical Society, the committee having concluded to print them in book form.

Review.

THE OPERATIONS OF SURGERY.—A Systematic Hand-Book for Practitioners, Students and Hospital Surgeons. By W. H. A. Jacobson, F. R. C. S., Asst.-Surgeon Guy's Hospital, etc., 8vo., pp. 1006, Philadelphia; P. Blakiston Son & Co., 1889.

Mr. Jacobson has given us a most valuable treatise, and especially is it so to the general practitioner. After a thorough discussion on the mooted points of procedure, he analyzes opinions and draws deductions which are of worth. A wide field of personal experience, and a logical mind, enable the author to carry conviction, and one feels after perusing an article that something definite is fixed in his mind. In some of our best books on operative surgery, the authors have, it seems, tried to give the methods of all, leaving the seeker after information to decide entirely for himself which to follow. Often this is quite sufficient, as there is no rule applicable to every case, still it is best to adopt operative measures such as have proven most favorable in the majority of cases. It is almost impossible to include in one book everything within the domain of the operative surgery of the day—too many operations are only on trial, yet such undoubted, sound teachings as Senn's have been entirely overlooked. Neither do we find the brilliant work of Horsley on the vertebral column, which has given such an impetus to aggressive measures in all traumatic and chronic lesions of the cord and its envelopes, more than alluded to. The different operations for club-foot are not sufficiently described—Phelps' method is not mentioned. Indications for and against operation are frequently noticed, and it is the latter, in such a work as this, which will be found most serviceable—"points" are to be found which might require an extensive amount of research, even to the specialist, and these are illustrated from the experience of the writer. If authors in medical literature, generally, approached Mr. Jacobson's success in his undertaking, practitioners would not be compelled to purchase so many books which are urged upon us by publishers—they would not be necessary. J. E. S.

Correspondence,

THE MEETING AT DENVER.

Denver, Col., June 20, 1889.

The Colorado State Medical Society convened for its nineteenth annual session on Tuesday and Wednesday, June 18th, and 19th in Odd Fellows hall, with their genial President, Dr. S. A. Fisk, in the chair. Over sixty members were in attendance. The meeting was opened with prayer by Rev. D. H. Moore, D. D. and the minutes of the last meeting were read and approved. The following papers were read:

Section on Surgery.—Title: "Surgical Cellulitis," by Edmund J. A. Rogers, Denver. Discussion opened by J. Culver Davis and Jesse Hawes.

"The Conservative Treatment of Compound Fractures," with Illustrative Case, by W. R Whitehead, Denver. Discussion opened by F. J. Bancroft and O. J. Pfeiffer.

Section on Ophthalmology.—Title: "Entropium," by John Chase, Denver. Discussion opened by E. C. Rivers and F. H. Lay.

Section on Obstetrics.—Paper by A. Stadman, Denver. Discussion opened by J. H. Finfrock and A. M. Bucknam.

Section on Gynæcology.—Title: "Electricity in Gynæcology," by J. W. Collins, Denver. Discussion opened by H. A. Lemen and T. H. Hawkins.

"Diagnosis of Tumors of the Ovary."—By John Boice, Denver. Discussion opened by J. W. Collins and H. A. Lemen.

Section on Medicine.—Title: "The Influence of the Bacilli Theory Upon the Treatment of Ththisis." By Jacob Reed, Jr., Colorado Springs. Discussion opened by B. St. Geo. Tucker and F. F. D'Avignon.

"Report of One Hundred Cases of Typhoid Fever." By J. N. Hall, Sterling. Discussion opened by W. A. Jayne and L. E. Lemen.

Section on Neurology.—Title: "Spinal Irritation and the Affections Which May be Mistaken for it." By J. T. Erskine, Denver. Discussion opened by W. H. McDonald and J. H. Kimball.

"Percussion Outlines of the Normal Heart." By H. B. Whitney, Denver. Discussion opened by E. J. A. Rogers and C. B. Lyman.

Section on Laryngology.—Paper by S. E. Solly, Colorado Springs. Discussion opened by H. H. Howland and B. Tauber.

Report of Committee on By-Laws.—E. C. Rivers, Chairman.

Report of Board of Trustees.—H. E. Lemen, Chairman.

Report of Committee on Collective Investigation.—J. T. Erskine, Chairman.

Annual Address of the President.—Sam'l A. Fisk, Denver.

After which the following officers were elected for the ensuing year:

President.—J. W. Collins.
First Vice-President.—J. T. Eskridge.
Second Vice-President.—T. H. Hawkins.
Third Vice-President.—M. H. Sears.
Corresponding Sec'y.—H. W. McLauthlin.
Recording Sec'y.—Clayton Parkhill.
Asst. Recording Sec'y.—J. N. Hall.
Treasurer.—W. F. McClelland.

Board of Trustees.—H. A. Lemen, Jacob Reed, Jr., J. C. Davis, W. R. Whitehead, A. Stedman, L. E. Lemen, W. E. Wilson.

Committee on Admissions.—T. A. Hughes, J. P. Kelley, W. M. Bonnett, John Chase.

After the installation of the officers-elect, and attending to the unfinished business, the meeting adjourned *sine die*.

In the evening the Denver physicians banqueted the visiting brethren at the Windsor hotel, and a right royal good time was had. We hope it will fall to our lot to meet the physicians of the Colorado State Medical Society next year. H. J. P.

East Portland, Oregon, Apr. 9, 1889.

H. J. Penfold, Publisher.

Dear Sir:—Having carefully read the sample copy of The Omaha Clinic, which you were kind enough to send me, I must say that I am highly pleased with it, and can assure you that it compares favorably with any of the Eastern journals. You will please place my name on your subscription list.

M. J. Patton, M. D.

TAKE THE "OMAHA CLINIC."

I believe that every regular physician in the state of Nebraska should not only read but contribute his influence to this valuable medical journal, as it is the only medical journal that is printed in our young and growing state, and that contains many valuable articles on medicine and surgery, as the success of this or any other medical journal in a measure depends upon its contributors. I know the editors to be men of energy, experince, and scholastic attainments, and who have given us a first-class medical journal. The days of the grasshopper, the buffalo and the native Indian, have past and gone, leaving us in peaceful possession of this vast and fertile country that now contains more than a million of people, whose lives are placed in the hands of the skillful physician. Therefore, it is the duty of every physician to prepare himself for his responsible position. It is true, no doubt, that you are taking medical journals published in eastern states that you will offer as an excuse against The Clinic, etc. This, in my opinion, is an injustice to our home institution, when we have a medical journal that is better adapted for this climate, and that is published in our own young and growing state. Then why, let me ask you, will you refuse to patronize your home journal? The Clinic is not intended for Omaha doctors alone—oh, no; but for every physician of this or any other state who can contribute an interesting article upon any scientific medical subject. And now before I close this short article of advice, let me say to you, if you wish to succeed in the practice of medicine in this "western country," and become a benefactor to its people, take, read and contribute your mite and knowledge to The Omaha Clinic—and you will also find that iod pat, ʒiii, tincture lobelia, syr. ipecac, aa℥i, aqua ʒss, and trifolium comp ℥ii; mix; sig, teaspoonful given every three hours, wlll relieve hay fever, asthma, or any persistent cough. Wm. Protzman, M. D.

Lincoln, Neb.

SOUTHERN DISTRICT MEDICAL SOCIETY OF NEBRASKA.

The Southern District Medical Society of Nebraska was held in the M. E. church at Fairbury, June 26th. This was the second annual meeting, and was one of unusual interest. Jefferson, Thayer, Nuckolls and Saline counties were represented.

Dr. Easton read a paper upon "Septicæmia," Dr. Pritchett read one upon "Surgical Treatment of Abscess of the Brain," Dr. Manary reported an interesting "Hæmatoma in a New Born Infant." The papers were earnestly discussed.

Thursday evening addresses were delivered by Dr. Dodge, Dr. Thompson and the retiring president, Dr. Bradshaw. The occasion was further enlivened by the singing of some appropriate pieces by a quartette.

The following officers were elected for the ensuing year: President, Dr. C. M. Easton, of Hebron; Vice-President, Dr. G. L. Pritchett, of Fairbury; Secretary, Dr. F. J. Thompson, of Fairbury.

The whole affair was happily concluded by a banquet tendered the society by the Fairbury members. The next meeting will be held in Fairbury the last Wednesday in September. C. M. Easton.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

Dr. J. E. Summers, Jr.,
208 So. Fifteenth Street, Omaha, Neb.

Surgical Progress.

On Inflammatory Disease of the Seminal Vesicles.—Mr. Jordan Lloyd reports (*British Medical Journal*, April 20th, 1889,) several cases of disease of the seminal vesicles, as to which he makes the following remarks:

Seminal vesiculitis is usually secondary to mischief in the urethra. It is a common accompaniment of gonorrhœal epididymitis, and originates in a precisely similar manner. When the inflammatory process has crept from the urethra along the common ejaculatory duct to its termination, it is likely to proceed along the short seminal tube to the vesicle, as along the twenty-four inch vas deferens to the epididymis. It commonly extends along both these structures. Mr. Lloyd has seen the vesicles inflame secondary to urethritis, set up by the passage of a bougie, by the presence of a stricture, and after coitus with a leucorrhœal woman. He has seen both vesicles suppurate in one case where their inflammation appeared to be primary; at least there was no antecedent cause discoverable in the urethra. When acute inflammation attacks a vesicle it gives rise to a swelling at the base of the bladder, the greater part of which is due to effusions of inflammatory products into the perivesicular connective tissue rather than into the cavity of the vesicle itself, just as in epididymitis the bulk of the enlargement depends upon inflammatory infiltration into the connective tissue between the tubules of the epididymis.

Seminal vesiculitis, like acute epididymitis, most frequently terminates in resolution. It sometimes ends, however, in suppuration, and when this occurs, pus may make its way laterally into the ischio-rectal fossa, or may diffuse itself deeply around the rectum (constituting one of the varieties of perirectal suppuration), or may discharge itself by the ejaculatory duct, or may open either into the bladder or rectum, but never into both cavities together.

The symptoms of vesicular disease are essentially those of vesical irritability—increased frequency of micturition, attended by more or less pain. They are like those of prostatis, according to Professor Humphry, and consist in uneasiness about the perineum, painful emissions at night, bloody semen, persistent gleety discharge, and irritability of the bladder and sexual organs.

Zeissl says that the subjective symptoms differ but little from those of prostatitis; but there is one symptom which belongs exclusively to this disorder, namely, erections are well-nigh constant, and so painful as to constitute priapism. According to Lallemand, Gosselin, and Pitha, involuntary seminal emissions occur.

Objective symptoms are much more reliable, and are easily elicited by careful methodical examination. A finger in the rectum recognizes an elongated swelling beyond the prostate, running obliquely upward and outward, at the side of the base of the bladder. This swelling is made quite evident to the examining finger when a metal bougie is passed into the bladder and moved from side to side across the tumor. Mr. Lloyd has demonstrated a distended vesicle in this way, and has verified the diagnosis by aspirating seminal fluid through the rectum.

The conclusion he is led to by his present experience are as follows:

1. That inflammatory disorders of the seminal vesicles and their ducts are not uncommon.
2. That they are, in many respects, analogous to inflammatory diseases of the Fallopian tubes in women.
3. That while occurring sometimes primarily, they are, as a rule, secondary to inflammation of the urethea.
4. That the ejaculatory ducts may become obstructed, and the seminal vesicles consequently hyper-distended.
5. That termination by suppuration is exceptional.
6. That when suppuration occurs it should be dealt with by incision from the perineum rather than from the rectum.
7. That gonorrhœa is by far their most common originator.
8. That they are frequently concomitant with gonorrhœal epididymitis.
9. That they are usually diagnosed as inflammation of the prostate or neck of the bladder.
10. That while certain subjective phenomena are suggestive of these disorders, their diagnosis can only be made by objective examination from the rectum and bladder.—*American Journal ot the Medical Sciences.*

THE JUGULATION OF ACUTE DISEASES.

By L. A. Merriam, M. D., Omaha.

The word jugulation is derived from the Latin verb *jugulare, jugulatum,* meaning to strangle; the suffix *ion* means *the act ot.* The meaning of the word in its orthographical sense is, the act of strangling. Dunglison has defined the word, "The sudden cutting short of a disease by remedial agents." In its full signification it means not only to shorten the duration of the disease, but also to lessen the severity of the symptoms and prevent or mitigate the development of pathological lesions. A popular, but erroneous belief among the laity, and the majority of physicians is that the acute diseases have a natural period ofcontinuance, notwithstanding the best efforts the scientific physician may put forth, and that the whole duty of the physician consists in alleviating suffering and conducting the disease to a safe termination, even though it may take weeks or months to do so. This idea, originating in ignorance, has been perpetuated by the dishonest physician, who regarding the practice of medicine as a method of making money, prefers to extend the number of his visits, thereby increasing the size of his bill. The progress of scientific inquiry during the present century and especially during the last twenty years has demonstrated much, concerning the nature of diseases, their prevention and appropriate treatment, yet, how many physicians of to-day resort to methods of treatment long since proven to be erroneous from a scientific basis, worse than useless, even detrimental to the best interests of the health and life of the patient. The meager scholastic attainments required by our medical colleges, the brevity of the course pursued in college, the apathy and indifference of the people and our legislators in enacting appropriate laws relative to who may practice medicine are largely to blame for this state of affairs. We gather in our State Medical Society the best educated and most skillful physicians of the State, and yet even here I shall find opponents to the progressive views I offer. Most of you will readily admit that there may be a few acute diseases which may be jugulated, or cut short in their early stages before pathological lesions have been produced, and that some other diseases may be so jugulated that the pathological lesions will not be severe or extensive, but you are not yet ready to admit that all or even many acute diseases can be thus successfully jugulated, nor are you ready to dispense with your old method of polypharmacy and accept the scientific treatment of to-day, with pure medicine and definite doses. That the practice of medicine is becoming more precise, more accurate, more uniform and more scientific is acknowledged by all studious, progressive physicians. The reason for this is found in the progress made in chemistry and pharmacy and the reliable and accurate alkaloids and other medicines of a definite chemical composition, with a definite action, now furnished for our use.

That all acute diseases, when placed under proper treatment in their early stages, may be successfully jugulated, I firmly believe. To demonstrate this, not only theoretically but also by the record of experience in actual practice, is the object of the paper I now present you. In all departments of nature, conditions mould, fashion and determine all things. Life, health, disease and death depend upon conditions. The clothes we wear, the houses and climate in which we live, the air we breathe, the food we eat and the fluids we drink, the occupation we follow, the time we sleep, and thousands of other incidents that constitute our environment, determine for us health and disease. Our duty then when called to treat disease, is to remove all unfavorable conditions, surround the patient with the most favorable conditions at command, and by appropriate therapeutic agents regulate the life forces of the body so that the organs and tissues in process of degeneration may be restored to their normal condition and function. If the disease be caused by the presence of some parasite or living organism that has gained entrance to the body, we must destroy that parasite if possible, and strengthen the life forces of the body, so that its powers of resistance being increased, the body may be able to successfully repel the invaders and withstand their murderous assaults. Compare if you will, the recent methods of prevention, management and treatment of surgical fever, puerperal fever, typhoid and typhus fevers, measles, scarlet fever, small pox, diphtheria, yellow fever, gonorrhœa and syphilis, generally known as germ diseases, and the methods of treatment in use less than twenty years ago. It is important to remember that a bad physiological condition is the principal accessory to the operation of the microbes, and while it is well to make a direct attack upon them with germicides, it is also very necessary to strengthen the organism against their influence by the use of the vital stimulants, chief among which stands strychnia and its salts. The value of cleanliness and corrosive chloride of mercury in surgical cases and the puerperal state, is well known to you all, but the great value of the sulphide of calcium in measles, scarlet fever, diphtheria, small pox and yellow fever, as an internal germ destroyer has so long been demonstrated, that no one who practices medicine need be ignorant of its virtue any longer. Take the long list of *pyrexias* the so-called inflammatory diseases, the result of various conditions, such as sudden chilling of the body, etc.

Some of these will be aborted naturally without medicine, due to the vigorous powers of resistance within the organism. Others will develop a condition, which we call febrile, and by its continuance the malady becomes localized and the affected organ undergoes alterations in structure we term *lesions*. By suppressing the cause of the lesions, namely the functional trouble which appeared at the commencement of the disorder, by controling the fever which is the manifestation of this functional derangement, we control the disease and it is averted or jugulated. It is true that some persons though exposed to various unfavorable conditions and severe infectious diseases do not contract disease because of their vigorous powers of resistance, hence it is a rational conclusion in the inception of a disease to strengthen the life forces of the body, restore the equilibrium and thereby abort the disease entirely or render it less severe. The jugulation of many acute diseases, when treated in the early stage, is often abrupt and complete. When treatment is begun at a later stage and degenerative changes are well advanced and pathological lesions well under way, the jugulation is less rapid, more time being necessary to restore the normal equilibrium.

Thus there are degrees of action in jugulation, it being more or less rapid according to the time at which therapeutic intervention was first entered upon, and also the severity of the disease to be treated. In some cases jugulation becomes progressive in character, diminishing the severity of the symptoms and lessening the duration of the disease, and it is a potent factor in preventing grave lesions, thereby forestalling the dangers that are sometimes found in convalescence. Considering then how diseases originate, and that there is always deranged function preceding the development of anatomical lesions, and that by restoring the deranged function we have jugulated the disease and prevented the lesions which always are developed when the case is left to nature, we conclude that it is reasonable to suppose that all acute diseases can be jugulated when properly treated. What this proper method of treatment is by which acute diseases may be successfully jugulated I shall proceed to show, basing my conclusions on actual cases in practice.

Let it be remembered, that I insist that the malady be treated early before the organic lesions become fixed. The difficulty at the first lies in the dynamic disturbances with which it commences and the keen diagnostician can form an opinion from these, without waiting for the pathological results. The dynamic disturbances prolonged, will surely bring about some pathological lesion, and to turn about this morbid current before great injury to some organ has been caused is the duty of the scientific and skillful physician.

I do *not* claim to cure a disease before it exists, but I do claim to diagnosticate the dynamic conditions, which if left to themselves, lead to pathological lesions often difficult to cure. And I do claim that under appropriate treatment these pathological lesions may be prevented entirely, in most cases, and in the remainder be very much lessened in extent.

If this can be done by a method of treatment more agreeable to the patient, more satisfactory to the honest physician, more sure of better results—because more rational and more scientific—surely it is a step of progress worthy the attentive consideration of all studious, thinking physicians to-day here assembled.

Let it be remembered that medicines, like foods, act upon living matter by their material and dynamic properties, and they become valuable when they furnish the vital energy which is requisite for the restoration of the normal equilibrium. Hence the necessity of giving medicines that are pure and have a definite strength. This can only be done by using pure alkaloids and other medicines that have a definite chemical combination. Discard all crude drugs, such as leaves, roots, tinctures, fluid and solid extracts, and by using pure medicines adopt the Dosimetric method as laid down by its founder and great teacher, Prof. Ad. Burggraeve, of Ghent.

What this Dosimetric method is, and what are its fundamental principles, I shall proceed to show. The word dosimetric, means measured doses, or the giving of pure medicines with mathematical precision as to quantity and time. The medicaments should be administered just so far as to produce the desired effect, and in small doses, increased in proportion to the acuteness of the disease. They should be given in small doses, because they facilitate the absorption of the medicament; because we are thus certain that we will never exceed the necessary quantity, and because we do not wish to lose sight of the condition of the patient and the amount of resistance he makes to the action of the remedies, and because by small doses we get continuity of action, which is more efficatious than an intermittent action.

The dose is proportioned to the acuteness of the disease, because in acute maladies, delay is often death, and it is necessary to suit the strength of the defense to the force of the attack. You will observe that in acute diseases the treatment is sharp and active. In chronic diseases the treatment is made to correspond with the character of the disease. These are the fundamental principles of dosimetry. Most of the necessary agents, principally alkaloids and their salts, can now be procured from the Chicago Granule Co. or from E. Fougera & Co. of New York. But now you may ask, can these granules of pure alkaloids jugulate disease. Take the initial fever of the pyrexias, which, if left to itself, persists with remittencies of more or less duration or regularity, sometimes rising suddenly and sometimes little by little, and under the influence of this fever, the condition of the patient becomes greatly aggravated. A general restlessness follows these symptoms of the localization of the inflammatory process and then the anatomical lesions appear in the organ which becomes the seat of the localization.

Now if it be true, as I claim, that by controling the preliminary fever, and restoring the prevented functions, we prevent the localization of the malady, we have surely jugulated the disease. The agents most used to accomplish this work are Aconitine, Veratrine, Digitaline and Strychnine given together every thirty minutes or every fifteen minutes and in quantities suited to the case in question. I do not claim to be able to correct the deviations imparted to our nutritive functions by the diathesis inherited from our ancestors but I do claim that by the use of pure alkaloids and other medicines having a definite chemical composition, we have the best and most scientific method of treatment at present discovered. Suppose you are called in the month of March at 1 P. M., to see a man who has been exposed to a severe rain storm, had become thoroughly wet on the night before, had a heavy chill at 9 o'clock in the morning, and you now found him with a temperature of 102° F., pulse 100, headache, backache and a general feeling of malaise, with a severe pain in the region of the right nipple, some coughing with a little expectoration of viscid, transparent mucus. On examination of the right lung you detect some engorgement. Shall you wait until you get the rusty sputa and crepitant rale before you decide that you have a case of pneumonitis. Three or four hours later you may have these symptoms but your time for action is precious. At once give your patient one granule each of Aconitine $\frac{1}{134}$ of a grain

Digitaline $\frac{1}{67}$ of a grain, Arseniate of Strychnine $\frac{1}{134}$ of a grain, Veratrine $\frac{1}{134}$ of a grain. They are tasteless, small, easy and pleasant to take and in a few hours you will have the satisfaction of finding the pulse and temperature falling to nearly or quite normal, a profuse perspiration, a general feeling of comfort and absence of pain. Plenty of water should be given with these alkaloids as an adjuvant. The rusty sputy and crepitant rale may not appear yet with these agents, even when they do appear the pneumonitis may be quickly, safely and completely jugulated. How this is done may not be easy of comprehension by those of you who have given this subject little thought.

"Vital motion is modified by every substance which comes in contact with living matter. It is for this reason that alimentation does not differ essentially from medication. A more definite difference is that while alimentation is always material, medication may be exclusively dynamic. Alimentation implies repair of expended substance; medication implies at one time assimilation of matter, at another time only modification of dynamic influence. Since dynamic changes constitute the primary character of diseases, medicaments ought to be modifying agents of vital motion, bound to restore to it its original intensity. If medicaments instead of simply modifying this motion, transform it into others, the loss of equilibrium will increase and a toxic instead of a salutary effect will follow. The same substance endowed with its peculiar energy, will at one time produce modification and at another perturbation. If the changed vital motion can utilize all the energy of the medicament and transform it into vital vibrations, the vital motion will be modified as it becomes stronger; but if the energy of the medicament, whether from its nature or the quantity used, transforms the vital motion into other forms, vitality will diminish and new perturbations will be developed. There is always, therefore, a limit to the action of a medicament beyond which toxic effect is apparent. Within this limit the action of the medicament is proportional to the quantity used; beyond it, new modes of motion are developed, and the proportion is no longer preserved."—*Castro.*

It is said by my opponents that the defervescent alkaloids, such as aconitine and veratrine are dangerous agents, and leave the patient in a great state of depression, hence they ought not to be used in ataxic and adynamic affections. In the hands of a bungler and ignorant physican, they, like the surgeon's knife and obstetric forceps, no doubt are dangerous. But in the hands of the skillful they are agents of precision, and are indispensable. Let it be noted that asthenia is in these cases hidden behind sthenia, and when sthenia is brought down, asthenia shows itself the more forcibly, the more violent the pyrexia has been. Here then comes in the great value of digitaline and arseniate of strychnine, in supporting the life forces of the body.

Of the one hundred and more dosimetric granules now ready for use, and used by many physicians, I have only thus far in this paper noted five, hence *do not* understand me to say that the jugulating of all acute diseases is done with these five agents. I have confined myself in this paper to these five agents because I began the trial of dosimetry with them, and can speak freely from a large experience, and because as those of you who have given no thought to this subject will not be able to grasp the entire list of alkaloids used, and because these are good agents for you to begin using if you wish to test the value of dosimetry.

I was called, February 20th, to see Mr. E.'s child, aged two and a half years. I found the temperature 102½°, and pulse 120 at 8 p. m. Subcrepitant and light mucous rales, existed, together with some roughness of the respiratory bruit, a weak resonance of voice and short moanings, with occasional cough. I readily made a diagnosis of catarrhal pneumonia, and selecting eight granules each of aconitine, veratrine, digataline, arseniate of strychnine and hydro-ferrocyanate of quinine, I dissolved them in thirty-two teaspoonfuls of water, and ordered one teaspoonful to be given every fifteen minutes for the next four hours, and then one teaspoonful to be given every hour thereafter. The effect was magical, the patient began to prespire freely before ten o'clock, the fever and other symptoms entirely vanished and did not again appear. The disease was completely jugulated. In this case I used strychniæ because I did not have brucine, which is preferably used in patients of tender years. Several cases of like character I have treated since, in like manner, with results far surpassing the older method of quinine, squills, ipecac and spirits of mindererus. In some cases I was compelled to discontinue the veratrine because it caused nausea and vomiting. I have used the dosimetric method successfully in measles, scarlet fever, pneumonia, diphtheria, typhoid fever and peritonitis, and have succeeded in jugulating these diseases, far better than by the old methods of polypharmacy, and with greater satisfaction to my patrons.

Many of the alkaloids I have never used, because I have had to grow into the practice by degrees, but I have seen enough to convince me that it is a great improvement over the nauseating compounds of polypharmacy and crude drugs. And when I read of the cases in practice by other reputable physicians, I have from my own limited experience seen enough for me to believe their statements, and I shall continue to use more of the alkaloids as I find myself able to apply them. Trusting that this brief paper I have presented will induce some of you to become interested in the new method, I ask your most thorough criticism, and thank you for your kind attention.

REPORT OF AN EPIDEMIC (LOCAL) OF A NONDESCRIPT.

By M. L. Hildreth, M. D., Lyons.

It has been said that "he who causes two blades of grass to grow where but one grew before, is a public benefactor."

But it is doubtful if this cheering encouragement will be accorded by the public to the investigator searching for new diseases.

The editorial columes of the *Weekly Medical Review* of April 6, contains an article copied in part from the *Philadelphia Daily Press* of recent date, with some editorial comment. The report to the *Press* purports to be from a lecture by Dr. Carl Seiler, of the University of Pennsylvania before a class. The nature, clinical feature, pathology, etc., as given by the reporter, in writing up Dr. Seiler's remarks, are somewhat curious and probably, withal, a little *mixed*. The reporter credits Dr. S. with designating the new disease by the classical name of "It" for the want of a better name

This meager report and one from a gentleman from Virginia, who reports a similar outbreak among the students of the University at Charlotte, (about 30 cases), constitute all of the literature of the disease, so far as the writer is able to find from watching a fair proportion of the leading journals.

There have been some fragmentary reports of a similar trouble, which has prevailed to some extent near St. Louis, but we have been unable to find anything definite.

The epidemic, if it may be called such, which has come under my observation during the past year, has seemed to partake of the nature of an influenza. It has been called by different names by the as yet few observers, who have thought it of enough importance to report it. The names which have thus far appeared by which to designate it, are mainly as follows: "Influenza," "Catarrhal Fever," "It" and one gentleman likened it to "Dangue," and indeed in some of its features the similarity is noticeable, in others entirely wanting.

In a recent letter from Dr. Seiler upon this subject, he suggested the name "Acute Pseudo-Membranous Mucositis."

The area of territory over which my observations have extended, would aggregate probably fifteen miles square and so far as we can learn has not extended beyond much these limits. It began to show itself during the summer of 1888. Was no respecter of persons, effecting young and old alike. The first few cases observed, were attributed to extraneous causes, certain kinds of work, exposure, cold, etc. But soon the cases began to multiply, and under such circumstances as to preclude the idea of anything accidental, and fix upon it a specific nature. In some, the symptoms were light, the subjects keeping about, suffering only a little inconvenience. In others, the onset was very severe, developing a condition that was truly formidable. The range of duration varied as much in individual cases, as did the intensity of the clinical features. One of the first cases the writer saw, came on not unlike the stage of engorgment in acute croupous-pneumonia. The subject was a young child, three years old. Saw him at 10 P. M. He had a sharp chill some hours before. Found him with a temperature of 105.5°. Cyanotic face, respiration greatly accelerated, (sixty to the minute) and catching, loss of motion on the effected side, and an intense pain extending from the region of the breast backward to the sub-scapular region, auscultation revealed nothing. After a few doses of an opiate, with three grains of Antifebrin, repeated, and fomentations to the side, he went to sleep, broke out in profuse sweating, and in the morning was comfortable.

In some adult cases the patients were confined to bed for from one to three weeks, and the sufferings were truly great. In one, a case of a negro, who was addicted to drink, and with health somewhat broken, and who went to a lake, fishing, just as the trouble began to manifest itself. Becoming intoxicated, he deposited himself in the mud and water on the bank, where he remained through the night. The symptoms were intensified, and he was in a pitiable condition for a number of months.

Summing up a typical case would be about as follows: The trouble would sometimes come on with a chill, generally wanting, and in place of it, or following it, a marked feeling of lassitude. Following this stage, in most cases, would come a fever, often high, and again in some cases no increased temperature. The fever seemed to have a wide range of limits as to duration. Daily fluctuation of temperature was slight.

The one ever-present feature was a peculiar pain, described by some as neuralgic, but lacking the sharp, lancinating character, and possessing points not unlike muscular rheumatism, aggravated by motion, extending through one or the other side, from the breast and the region below, down to the border of the ribs, backward to the inner border of the scrapula, and radiating upward to the side of the neck, and accompanied by a sense of constriction over the front of the chest, always present and very marked in well defined cases.

Another condition, which was present in perhaps 60 per cent. of cases, was a form of pharyngitis and tonsilitis, often with an exudate or pseudo-membrane. This was regarded at first as accidental, but further observation demonstrated to my mind that it was not a coincidence, but a part of the disease. Then again, a considerable degree of bronchial irritation would be present. In some cases the stomach would be much disturbed, nausea, vomiting, etc. These symptoms would vary much in different cases.

A later feature, or what seemed to be in the line of a sequence, was the involvement of the glandular system. In not a few cases the lymphatics became enlarged, with marked induration, and in the later stages occasionally suppuration would take place, accompanied by a condition of general septicæmia, with much prostration.

In one case, the subcutaneous glands in different parts of the body became severely effected, breaking down rapidly, leaving phagedenic-like ulcers, and producing a severe grade of septicæmia. This case would have passed muster, for a time, for one of acute glanders.

As to the nature of this disease—if we can accord to it the dignity of a disease—the trouble is undoubtedly due to a specific cause, a germ of some sort, and from the effects on the functions of the different organs, and especially of those lined by mucous membrane, it would seem probable that the initial point was in or on some mucous surface.

Where the germ comes from, and what it is, can only be determined by further pathological investigations. Opinions, unsupported by fact, would be of little value.

The fact that whole families were often affected, and, generally, one after another, would be strong evidence of its infectious nature. Another peculiar feature was, that it would appear simultaneously, at different points, widely separated, and where there had been no communication whatever.

No opportunity for post mortem study was obtainable as no deaths occurred.

The number of cases under personal observation would probably aggregate one hundred, but from heresay evidence, there was probably twice that number affected, in a radius of a few miles.

With reference to treatment. Being unaided by any positive knowledge as to the true nature and cause of the trouble, and without any guide in a specific line, we were forced to depend upon the old staff, "general principles."

During the acute stage some form of an opiate to control pain. Often the temperature could be reduced, and the pain controlled by the use of antifebrin, and the diaphoretic effects following seemed to be advantageous.

Most of the cases were put upon liberal quantities of sodii salicyl.

The use of revulsives and counter-irritants seemed to act nicely. As the septic condition and accompanying prostration became more pronounced, alteratives and a supportive line were instituted.

Other drugs than the ones mentioned were used, sometimes to meet individual features, and somewhat in the way of experimental medication, but the line indicated above seemed to give best results.

In conclusion, it might not be improper to state, that for some time, the writer was in doubt as to the propriety of occupying the time of the Society by offering this report. But as a defense, would assert a firm belief that we have a distinct disease to deal with, one heretofore undescribed and unclassified. And if this belief is well founded, it is worthy of our time and attention, even though it seems to be trivial and unimportant. It is to be hoped that some one with facilities and training for original investigation may soon have an opportunity for studying the train of morbid symptoms grouped together, and give us a more complete and clear description of it, especially in the line of causation, pathology, etc.

THE PRESENT ASPECT OF INOCULATION AS A PREVENTION OF DISEASE.

(Pasteur's Method.)

By A. S. v. Mansfelde, M. D., Ashland.

This new candidate for your favors asks your attention not because the subject itself is of utmost importance; nor because it seems to be the rage with man engaged in pathological research, nor because achievements have been attained in its consideration second to none in the annals of scientific medicine; but solely upon the ground that its practical application to the every day wants of the majority of the people living in this great state, the importance of which as an agricultural emporium becomes more apparent every day, means a successful issue of the pursuits of animal raising and corn growing. Another, though small claim for the present paper, is my connection with the attempts that have been made in this laudable enterprise in our own State.

My excuse, if one is wanting, for asking *you* to spend your time upon this matter is furnished by the analagous position of district school teachers in some of the German principalities, who are required to inform themselves upon the subject of grafting, budding, etc., so that they in their turn, may teach their scholars the art of not only growing figs on thistles, but to improve the already highly cultivated species of fruit trees familiar to them by their fruits.

I claim that in this country, and especially in the agricultural States and Territories, no one is by nature, by his training and his whole environment, so well adapted to teach the greater number of his constituents, the farming community, how to successfully battle with the parasytic plagues of the *fanna* and *flora* upon which they are dependent for their daily bread, as the physicians—the so-called country doctors. Many an hour spent in settling the fruitless controversies, arising from local intrigues and political and social differences, could be utilized for the aquisition of a familiarity with the diseases, due to parasytes, endemic upon small grain, corn, fruit trees, and domestic animals. Such a familiarity with these destroyers of animals and plants, would soon teach them the great importance of *experiment stations*, such as the one now in existence in our own State University. Their combined influence, based upon knowledge, would create a power which would strengthen and increase the result of the labors of such man as are now engaged in this work. It would prevent, also, the possiblity of an ignorant legislature to cripple the hand which supplies them and their constituents with blessings; it would also make it impossible for work to see the light of day, or that the people's money be wasted on it, which does not bear the impress of scientific research, or reaches the people so immature and crude, that even the hogs, upon whom the time and money is wasted, die in disgust. Two papers, so-call bulletins, have been issued from the Experiment Station of our University, one on the Texas fever of cattle and a later one on the hog cholera, which I would not be so cruel to insist upon your reading; yet, since our Nebraska press has contained extracts from many sources, eminently laudatory, your essayist being, as far as he knows, the only one who has dared to criticize these efforts, not altogether in the shape of an encomium, allow me to draw your attention to them; not to justify my standpoint nor to find fault with the author, but for the sake of mutual profit.

In the first place I ask you to join me in the protest that neither you nor the people of this State have the least interest in, nor do you care to have your time and money wasted upon the settlement of the question whether the author of these papers—Dr. Salmon of the National Bureau of Animal Industry—or your essayist, take precedence as natural or educated fools. What you and the people want and have a right to demand is to taste the fruit of our labors, for which you have paid.

The self evident fact is surely ignored by the author of the papers referred to, so that he wastes in his bulletin on Swine Plague of its 414 pages, space for 187 mostly unbecoming references to Dr. Salmon's views, with which he does not agree; further, on pages 289 to 297 he spends the people's money reiterating, what he had already said in an open letter to Dr. Mansfelde in the *State Journal*, that this personage, exceedingly small in his eye, is an ignoramus. He could have said it in these three words, and perhaps you and the people of Nebraska would have been as well satisfied.

The object of all inquiries and all experiments upon the field of Bacteriology is evidently, *the finding of the means by which the disease*, owing to Bacteria, and most if not all the infectious diseases of plants, domestic animals and man seem to be thus caused, *can be prevented or made innocuous.* A successful solution of this problem will repay all labor and all money spent on it, and I need not bring figures to prove it.

Many remedies have been suggested for these plagues, all of them empyrical in their administration, a few have seemed to alleviate and save, but none prevented the diseases nor stayed the hand of destruction. Latterly a new method of warfare has been suggested, one that has been found centuries ago to do some good work, especially in small-pox, that of inoculation. The materies morbi, if such could be procured, were introduced into the system of the patient through a trauma of the skin generally. We are all familiar with the fact that all epidemic diseases appear at times with a virulence that is simply appalling; at other times they cause but little discomfort and destruction. Experience has taught man, that one who had been fortunate enough to have fallen sick during one of the mild visitations of the disease, was usually thereafter refractory to the most severe recurrence of the plague. It was very natural therefore, that man should have sought to have taken the milder form rather than by accident fall a prey to a severe visitation. Thus inoculation became a practice. Later, the immortal Jenner observed that persons engaged in milking cows, sick with cow-pox, would take this disease, really an accidental inoculation, with this vital difference that the material was a *modified virus*, become so most likely, by transmission from man to the cow, and after they, the milkers, had had this *modified* small-pox or vaccinia, that they were refractory to genuine small-pox thereafter. Thirty years this careful observer labored over this problem, until in 1796 he *dared to do himself* what the milking persons were doing by accident. Still later, one learned in the causes of fermentation, Louis Pasteur, found that environment would change the fungi or their products, instrumental in the production of fermentative and putrifactive processes and he set to work to change accident into intelligent purpose by supplying the requisites for the changes himself. A step more and he endeavored to modify the material, which he thought instrumental, like a ferment, in producing disease. The result, as we all know, his vaccine or modified virus for anthrax. Since then all manner of diseases have been investigated to find the bacteria causing them, and some with success, such as tuberculosis, recurrent fever, typhoid fever, etc.

Three very important points in connection with this subject of the prevention of disease by the inoculation with a modified virus are still subjudice.

1st. How can a modified virus be procured, which shall be constant in its action—will not kill, and insure immunity from the disease?

2d. What is the nature of the material, which insures the subsequent immunity? and

3d. In what manner does the virus protect the inoculated body?

The present aspect of these questions, still unanswered, is the following:

First, in regard to the manufacture of the modified virus. This is procured by two very different methods. "The first is a growth of the bacteria, causing the disease, for many generations under different conditions, either upon dead, in different directions modified culture media; or upon living animals, little responsive or entirely refractory to the germs of the disease. The second method endeavors to gain the desired end by exposure for indifferent periods, of the virus, to heat, poisonous chemicals and other substances.

By the first method a gradual adaptation of the bacteria to the different culture media and saprophytic conditions of life takes place; their metabolis experiences a corresponding modification, the bacteria grow better, but seem to lose their power to multiply in the animal organism and to be destructively triumphant. Such weakening seems to take place with the cocci of erysipelas, the bacilli of glanders and lepra.

Other bacteria, however, and especially those, which are of much practical importance in daily life, being the cause of anthrax, rouget, chicken-cholera and tuberculosis, do not seem to possess such outspoken disposition to vary, and for them a modified virus is procured by the second method, by the application of higher or lower temperatures, for a longer or shorter time; or their subjection to such chemical agents as carbolic acid or bichromate of potash, and the abstraction or addition of oxygen and other gases.—(C. Fluegge).

These methods are by no means perfect, and their products vary constantly, and often become a source of danger, so that experimenters have to make guarded control experiments with every specimen of modified virus, for fear that its use may prove a deadly dose instead of a means of prevention. Another source of danger is the ease with which the most deadly virus may be mistaken for a vaccine. This occurred at Odessa, Russia, where 4,414 sheep were vaccinated with the strong virus of anthrax—3,549 dying in consequence of the mistake. It would not be a strong stretch of the imagination to explain the disastrous inoculation of hogs in Nebraska by a like cause.

Inoculation seems to have done a great deal of good; yet it is still so uncertain, that the German government prefers destruction of diseased animals and isolation of those suspicioned of exposure, to inoculation. The author of the bulletin on hog cholera in our own State, though he is very sure that he has found *the* bacterium that kills, and nearly as *sure*, that he has found the modified virus for inoculative prevention, uses this language on page 377: "But I positively assert *that it would be a malicious disregard of the public welfare to introduce this present method of inoculation indiscriminately, though it may be justifiable on farms that have become permanently infected.* Otherwise every fact in the natural history of swine plague plainly shows that the indiscriminate inoculation with material prepared as it now is would only be a means of extending the disease where it never had existed." The italics are the author's own—what follows ought to be printed in small caps and pasted into the hat of every farmer and on every hog fence in the State. What, do you think, can these lines mean? But one thing, surely, *that inoculation can be done with the virus of hog cholera*, so can it be done with the virus of small pox, and was done for centuries! And the consequences are identical—people died of small pox and infected others, who had not had it—it was only safe to inoculate a person and then to quarantine him. So our author—inoculate a hog, then put it into an infected pen and leave it to chance. Is this the method of Pasteur, of Gamalcia, and others? Is this Jenner's method, of using modified virus for inoculation? Neither in his bulletin on Texas fever nor on swine plague does our author tell us a word of his methods employed to make his vaccine. It would be hard to tell what he uses. The inference, however, is easy enough, that he experiments with the deadly virus, which he succeeded, or did not succeed in weakening, by methods equally a secret. Our author upbraids Salmon for using this language in 1883: "Surely we have here sufficient evidence to show that a reliable vaccine might be easily prepared, if we carried our investigations but a little way farther." If this remarkable language is not explained by the context, it is only excusable on the ground that "*a horse doctor*" wrote it! But what of our own author? He writes in 1888 or 1889:

"Since January, 1887, I have waited for the means to do that (find a vaccine for hog cholera) with whatever patience I could command, and only recently could I make a single experiment in that direction. Just as I had evidence which largely indicated that I had the means of settling this, the next important step in the development of this question (the vaccine) I had to stop for want of the kind of animals necessary to the work." Salmon stopped, because he wanted to; and our author stopped because his animals had given out. The former threw millions away, because he pleased to; the latter lost them for want of—an animal. Seriously, does this whole business not remind you of Keeley's perpetual motion scheme, and his duped stockholders?

Our second question, what is the nature of the material, which insures the subsequent immunity, shall now receive our attention.

Hitherto it has been universally supposed, excepting some isolated experiments, such as those of Chamberland and Roux, and repeated with varying success; the use of sterilized cultures of bacteria, *i. e.*, their metabolic products, changed or not by the heat employed to sterilize them; or the same cultures, minus the bacteria, which had been retained upon filters of porcelain. I say the accepted idea was, that the bacteria in a weakened, *i. e.*, a modified state, entered the body of the being to be made refractory; that these bacteria multiplied at the site of inoculation and then found their way into the blood and internal organs generaly, where they are finally destroyed, to leave the animal refractory to otherwise deadly doses of the same virus. Lately, however, the idea that the bacteria themselves are not necessary for such protection, *i. e.*, that their products, either alkaloidal or other compounds, are, or can be the efficient factors in causing immunity, has received a very strong assistance from the results of Dr. Alfred Lingard's experiments. After a number of these, he comes to the following conclusions, which are given entire and in his own words as near as a translation can give them:

First. It is possible to inoculate a fœtus in the uterus of the living rabbit with anthrax culture, without infecting the mother, an immunity to the disease being acquired at the same time by the young of the same litter. A control animal being vaccinated subcutaneously dies in sixty-eight hours.

Second. The mother may throw a litter of healthy young several days after the inoculation; the one, however, which was inoculated in utero, is always dead. The longest time of the continuance of pregnancy after the inoculation, is ten days.

Third. The presence of the bacillus anthraxis is not demonstrable in the blood of the mother, from the time of the inoculation of the fœtus until its birth: 1st, In fresh preparation. 2d, In stained cover glass preparations. 3d, In cultures upon gelatine at 20° C., and upon agar—agar at 37° C; and, 4th, by inoculation of the mother's blood into other animals.

Fourth. Such a mother being vaccinated with the blood of an animal which had died of anthrax, this blood being crowded with anthrax bacilla, does not succumb to the disease. The control animal dies in forty-eight hours.

Fifth. Twenty-four hours after the second vaccination no bacilli can be demonstrated in the blood of the mother, the tests as given in No. Three, being used.

Sixth. The same animal vaccinated with violent anthrax poison eight months later, remains entirely well, is still therefore refractory to the poison.

Seventh. The shortest time elapsing between the inoculation of the fœtus and the establishment of immunity of the mother was thirty-six hours.

Eighth. For the immunity of the young of the same litter with the one inoculated in utero, a longer time is requisite than for the mother. They acquire immunity, if a longer time than six (6) days intervenes between the primary inoculation and their birth.

Ninth. In isolated cases the mother also succumbs to the poison. These are cases, where, at the time of the inoculation of the fœtus, the tissues of the mother are accidentally injured. With exception of the last named cases, no anthrax bacilli are found in the heart blood of the young of the same litter in utero. But it is requisite that the examination is not postponed but a few hours after the death of the mother. If done sixty to seventy hours later, some of the fœtuses, or all of them, as the temperature of the air happens to be, contained in their blood anthrax bacilli.

Tenth. The result of an inoculation of a fœtus in utero with anthrax bacilli is a threefold one: 1. If during the inoculation of the fœtus, through accidental injuries, bacilli find their way into the tissues of the mother, she necessarily succumbs also to the poison. 2. There are also cases, where the bacilli find their way from the inoculated fœtus into the circulation of the mother, which is, consequently, also infected. In these cases the bacilli can be traced from the fœtal to the maternal side of the placenta in cut preparations. 3. Finally there are cases where the inoculated fœtus alone succumbs, the mother remaining free from anthrax, *yet she becomes refractory to anthrax*. In these cases, in cuts through the placenta, the bacilli can be demonstrated upon the fœtal, but not upon the maternal side.—(Fortschritte der Medicine, April 15th, 1889.)

The important results are given in their entirety, because they seem to leave no doubt that the bacilli themselves need not enter the body, as a necessary factor in the production of immunity, but that they are the factors, nevertheless, by which the material is produced that causes immunity.

The experiments of A. Langard find an abundant confirmation in clinical experience. It is by no means a rare occurence that a human mother will give birth to children, carrying the marks of infective diseases acquired in utero, the mother being free from them; and in the case of small pox it has been shown that she is refractory to the vaccine virus after this occurrence.

Our third question: In what manner does the virus protect the inoculated body; has been answered in four principal ways:

First, the retention hypothesis of Chauveau, consists in the assumption, that the products of tissue change of the bacteriæ themselves are deleterious to them, and are retained in the body of the host —preventing a second successful invasion of the same kind. This has been shown to be erroneous by the experiments of Sirotinin, who has demonstrated that the action on culture media of one crop of bacteria produces either acid or alkaline changes, or the exhaustion of the nutriment. A change of the reaction or the replacement of the food substances would at once prepare the culture medium for a second crop of the same bacteria. The retention of a free acid or alkali in the fluids of the body is of short duration—therefore a satisfactory refutation of the retention hypothesis. Yet, after all, it has been shown by Behrung, that white rats are so refractory to anthrax bacilli because of the presence of a basic body in their blood. "The difference, then, of the blood serum of rats and that of animals susceptible to anthrax, is, that the former is more highly alkalescent. Through addition of acids to rat blood serum this becomes a good culture for anthrax, and the blood serum of rats, which during life were treated by such means, as will lessen the alkalinity of the blood, permits an abundant growth in it of anthrax."

H. Bitter has shown that immunity after vaccination, or an attack of the disease, is not caused by an exhaustion of the culture medium in the body. It is demonstrated that the blood serum of animals dying or dead from anthrax, chicken-cholera or rouget is still a good culture medium for the same bacteria, they will grow abundantly in it. Thus the second, the exhaustion hypothesis of Klebs and Pasteur, claiming that the first invasion of bacteria consumes the pabulum necessary for their growth and multiplication, leaving the body in a condition unfitted to give sustenance to a second crop of the same species of bacteria, falls to the ground as untenable.

The same observer, H. Bitter, disclaims the universal applicability of the third hypothesis (Buchner Wolffberg) which claims that the first invasion sets up such a change in the organ mostly affected, that a second settlement of the same kind of barteria in it becomes impossible. Bitter shows that the immunity includes the whole body of the animal and that the strong virus, injected intravenously even, will not affect the animal. The fourth Hypothesis, Metschnikoff's Phagocytosis teaches that certain cells of the body, especially the leucocytes after a first invasion acquire an increased capacity to take up and destroy a subsequent crop of the same kind of bacteria. The hypothesis has and does even now enjoy a great popularity; it is so very easy to concieve a host of cells to stand ready to eat up the intruder. It sounds so plausible and had the support of such men as Virchow even,—whose paper "The Battle of Cells with Bacteriæ" I had the honor of first bringing to the notice of the American physicians. Yet Emmerich and DeMattei have shown by experiment, that a bouillon culture, injected subcutaneously, after twenty-five minutes contained no longer living bacteria when taken from the site of injection and examined. Surely Metschnikoff's phagocytes could not have accomplished this result by devouring all of the bacteria in this short period. The authors, just quoted, assume that the bacteria through their tissue change, as well as by the effete matters accumulating from their dead bodies, supply a substance which, when brought in contact with material furnished by the cells of the body and contained in the fluids of it, becomes an active poison to the bacteria, but is entirely harmless to the body cells. At the same time this new material, presumably an alkaloid, bound to an albuminoid substance, enters the cells of the body and changes the chemical composition of their contents, so that they become entirely refractory to the bacteria. This conception of the protection offered by inoculation does not exclude the possible assistence of the phagocytes and of other means in destroying bacteria and making the animal refractory. It also permits a conception of the manner in which an affected embryo causes an immunity of the mother without a personal contact with the bacteria.

But I fear if I continue you will take the infection, which you could only prevent by a hasty retreat; a vaccine to extinguish the enthusiast has not yet been discovered. Enough has been said to demonstrate to you that the field of bacteriology has need of many more workmen, its cultivation is but just commenced. When the harvest comes, can you imagine its richness?

TYPHLITIS AND PERITYPHLITIS, WITH REPORT OF CASES.

By J. W. Bullard, M. D., DuBois.

Typhlitis is an inflammation confined to the cæcum and its vermiform appendix. Perityphlitis is an extension of the inflammatory process to the connective tissue surrounding the cæcum and its peritoneal covering. I say extension because the initial lesion is generally in the cæcum or appendix, this, however, is not invariably the case, for the incipient point of inflammation may be extra cæcal. Perityphlitis is an involvement of the extra peritoneal and post cæcal connective tissue.

To my mind a positive differential diagnosis between the latter two, in the antimortum state, would be but a matter of conjecture, unless by operative procedure.

Until the year 1827 (so writes Whittaker in Pepper's System of Medicine) these affections had been described as inflammatory tumors in the right iliac region. Puchelt was the first to give the distinct name Perityphlitis to inflammation of the cæcal connective tissue.

Oppalger in 1858 and 1864, became very

precise in his differential diagnosis when he set apart perityphlitis, as a term denoting a condition which is simply an involvement of more tissue.

Among the older anatomists and physiologists, especially those of a teleological turn of mind, much speculation was indulged in as to the possible use of the vermiform appendix. I have heard a professor of physiology say that it was put there simply to be the means of killing somebody. Its existence is superfluous, undoubtedly, so far as science has been able to ascertain and it is now generally acknowledged I believe, to be the remains of what is an auxilliary stomach, in the lower forms of animal life. In the graminivorous animals, the head of the colon is very large. In the carnivora it is much reduced, for in these animals there is little residue after the process of digestion, and in the omnivora, to which class man belongs, it is still more reduced. Since the diseases in the region of the cæcum have become more fully recognized, " Kraussold who complained that the vermiform appendix had received only stepmotherly treatment at the hands of anatomists and clinicians" began a systematic investigation which revealed the fact that very often and very great anomalies do occur in the anatomy of this worm-like attachment to the head of the colon; for, from being abnormally long to entirely absent, it was found to arise from different points on the cæcum and to be in all conceivable shapes. Its normal dimensions, according to Gray's anatomy, is from three to six inches long and the size of a goose quill.

It seems, taking into consideration the anatomy of the parts in this locality, that typhlitis and its allied diseases are of comparatively rare occurrence, for, owing to the stagnation in this part of the intestinal tract, and with the mouth of the appendix vermiformis ever turned toward the circulating contents of the bowels, with apparently very little to hinder any intestinal concretion, or other solid substance small enough from entering it and becoming the cause of a dangerous inflammation, it appears a probable hypothesis, that the demand for the relief of these affections would be the most prolific source of financial income to the physicians and surgeons.

It is probable that you ladies and gentlemen are well acquainted with the anatomy of this particular part of the abdominal cavity, if not, you can acquaint yourselves with it at your leisure.

Clinical experience and statistics teach us that these affections show a decided predilection for the male sex and during the period of adolescence. Nearly three-fourths of the cases collected by Matterslock were male. The greatest number of cases occur between the ages of ten and thirty years. Just why the male sex is more liable to be attacked than the female, we are not told. The reason given for the increased liability to the disease during the most active period of life is, that the valvular like fold which usually closes the orifice of the appendix in part, is more prominent during that period of life. The causes may be divided into predisposing and exciting. Then we might make another division: internal and external. Internal—those affecting from within, such as disease virus, foreign bodies, faecal concretions and chemical agents. External—those acting extrinsically to the lumen of the cæcum or appendix, such as contusions, wounds or rupture of fibers from violent muscular action.

The predisposing causes are the anatomical formation of the parts, both normal and abnormal.

Da Costa in his work on medical diagnosis says, that "inflammation of the cæcum or of its appendix, is in the majority of cases caused by the accumulation of hardened feces or by hardened bodies which have there become impacted." Which assertion, I think, is hardly warranted from clinical observations, for in all the cases which I have ever examined, there was an apparent absence of any hardened substance in that region at the inception of the disease; and again, if such were true the disease would be of very common occurence in aged people and more prevalent among females than males, during the period of adolescence; when the facts in the case are that it is very rare among these classes. That an accumulation of hardened feces may and does act as an exciting cause in some cases, I do not attempt to deny.

But that the impaction in the cæcum and colon is more frequently the result than the cause of the trouble, I do aver.

On the other hand, however, when the initial inflammation began in the appendix in a majority of cases, no doubt there was some impacted substance in the appendix which acted as the exciting cause.

The most probable exciting cause of a simple attack of typhlitis is the presence in the cæcum of some substance, either mechanical, chemical or vital, which has traveled innocuously the alimentary canal to finally lodge sufficiently long in this most stagnant portion of the intestinal canal to become the source of disease.

The symptoms will be spoken of when a few cases are cited.

The average death rate under the old order of things, when the nature of the disease was not understood, was appalling, 80 per cent of the cases succumbing to the malady; but with our better knowledge of the anatomy, pathology and therapeutics, relative to these affections, and with the great advance in abdominal surgery, I think I am safe in asserting that the death rate is as low, if not below, 10 per cent, which is indeed a very gratifying showing in favor of modern therapeutics and surgery.

The treatment resolves itself into both medicinal and surgical. Standing pre-eminently above all other therapeutic agents of real value in the treatment of typhlitis and its allied affections is opium.

Regarding the best form in which to administer it, Bartholow, in his recent work on Materia Medica and Therapeutics, says that morphia, subcutaneously, is the best mode of administration, but it must be borne in mind that Prof. Bartholow, on the subject of hypodermic medication, is an enthusiast, and clinical experience has demonstrated the fact to clinicians generally, that the administration of opium with all its active principles, produces better results in the treatment of inflammations of serous membranes than does its active principle, morphia, and especially is this true in the treatment of peritonitis. But of prime importance in the treatment of these maladies is the discovery of the cause, if that can be done, but unfortunately that is not possible in all cases.

When it is possible to decide that some indigested piece of aliment or hardened feces in the caecum is responsible, we should have no hesitancy about instituting means to bring about it's expulsion. If, for instance, we have an unmistakable typhlitis stercoratis, this will be best accomplished by irrigation of the bowel below and the administration of small and frequent doses of some saline laxative, preferably sulphate of magnesia.

To properly irrigate the bowels, a fountain syringe is almost indispensable. The hips should be well elevated, and either simple warm water or warm soap suds used. With the reservoir of the syringe not to high above the patient, the fluid will gently enter and permeate every accessible part of the calon. At the same time water should be poured in from above by the action of the salts, and the hardened accumulation is softened and frequently passed away from one such irrigation; but in one case of fecal accumulation in ascending color, that I recall to mind, I repeatedly allowed two quarts of liquid to flow in at one time before the desired end was accomplished. If pain be present, opium should be administered in sufficient quantities to allay the pain. The best preparation of opium is the aqueous fluid opium, essentially the same as the deodorized tincture of pharmacopoeia.

The following case will serve to illustrate the plan of treatment when the case is not one of fecal accumulation:

On June 1st, 1888, Mr. K., German farmer, aged about 40, came to my office, leaning forward and inclining upper part of body slightly to the right, and complaining of pain in umbilical and right iliac regions, which had persisted for past day or two, though he had taken the customary dose of pills, which acted well. Pain and soreness was so severe that he could not straighten up. Had him lie down and made careful palpation over abdomen and found much soreness and considerable thickening in cæcal region. Temperature and pulse both above normal, tongue coated.

Patient complained of thirst. Prescribed the following solution to be taken a teaspoonful every three to six hours, according to urgency of symptoms:

℞. Fld. Opii Aqueous ....ʒiss
Tinct. Aconit Rad ....gtt xxx
Ext. Hyoscyami Fld ....ʒi
Syrup Simpl, q. s., a. d. ....℥ii
M.

Also a strengthening liniment, to be applied over the affected region, and instructed him to go to his home, four miles out of town, go to bed, apply hot hop poultices to abdomen, and take no more cathartic medicine.

Heard no more from my patient until the 5th, when I received a call to see him at his home. Found him with anxious expression of countenance. Circulation over one hundred per minute, and temperature 102½° F. Contrary to my directions he had taken another cathartic, which acted well, but gave him no relief. Found very distinct tumor in right iliac region, which was very tender and gave semi-tympanitic note on percussion. Opium continued, but gave instead of aconite Norwood's tincture of veratrum. Local treatment continued. Interdict all solid articles of food and recommend liquid diet.

6th.—Patient about same, except under influence of opium. Treatment continued.

7th.—Slight improvement. Treatment continued except anodyne taken less frequently.

Did not see patient on 8th.

9th.—Not so well. Neglected to take anodyne as directed. Tumor more tense and very tender to touch. Same semi-tympanitic note on percussion. Ordered local treatment, liniment and poultices continued, and opium and veratrum taken more regularly.

10th.—No perceptible change in tumor, but patient resting easier. Treatment continued.

11th.—Pulse and temperature have fallen somewhat, and patient feels better. Discontinue veratrum but continue opium and local treatment, and order the following to be taken every two hours.

℞. Magnesii Sulph..........................℥i
Acidum Sulph. Arom...............ʒiss
Aquæ Cinnamon, q. s., a. d.......℥iij
M.

13th.—Patient doing nicely; no fever; tumor very distinct on account of disappearance of swelling, which had surrounded tumor proper. Not so tender to touch, but bowels have not moved. Discontinue anodyne but continue laxative, and add the following, a capsule to be taken every three hours:

℞ .Quinine sulph..................gr. xvi.
Hydrastis pul...................gr. x.
M. Div capsule, No. viij.

Order injection of soap suds to assist action of salts.

15th.—Patient much improved in appearance; bowels have moved copiously; tumor is disappearing and tenderness nearly all gone; tongue clearing and appetite returning. I instruct patient to use liniment until tumor is entirely gone; continue taking capsules and liquid diet, also laxative solution, but less frequently.

Here was a case lasting two weeks and ending in resolution, which, owing to the severity of the case, was quite worthy of notice. This was undoubtedly a case of perityphlitis, but I was ignorant of the cause, and am to this day. The patient made a good recovery.

The other two cases that I shall record here both demanded operative interference.

CASE II.—About March 24, 1887, Dr. W. brought me a sample of urine for microscopic examination, from Sarah K., aged 5 years, the doctor thinking at that time that the case was one of kidney trouble. The result of the examination was entirely negative so far as kidney disease was concerned, and on the 29th I was requested to see the case with the doctor. Found little patient with anxious expression, dorsal decubitus, with thighs flexed, especially right one, elevated temperature and rapid pulse. There was a decided tumor in right iliac region, which was very tense and tender. The tumor extended from right iliac fossa to above the crest of the ilium. It was decided that aspiration should be done before an incision was made. In procuring an aspirator a delay of two days was occasioned.

On 31st saw patient again. Fluctuation could now be elicited just above crest of the ilium in right lumbar region. Patient was put under the influence of chloroform and the needle introduced at above named point, and a quantity of offensive gas and several ounces of pus drawn off. The cavity was then thoroughly cleansed with a carbolized solution and the needle withdrawn.

April 5th.—Cavity having refilled, I was asked to see patient again. An anæsthetic was administered as before and a free incision made near the puncture, when several ounces of pus again escaped. Cavity was thoroughly cleansed as before, and drainage tube inserted. I saw the patient no more, but learned from Dr. W. that she made a good and uneventful recovery. This was evidently a case of the so-called paratyphlitis where resolution did not take place.

Case III.—January 13, 1886, Mr. B. called at my office and said that his son Bert, aged 13 years, had severe pains in his bowels. I prescribed an anodyne and dismissed the case from mind. On the morning of the 15th I was called to attend Mrs. B. in confinement. Mr. B. informed me, on the way, that he had taken Bert in the sleigh to his uncle's and he wished me to stop and see him on my return, as he was not getting along very well.

Saw patient at 8 A. M. Temperature and pulse normal or nearly so. Bowels moving nicely from effects of a dose of castor oil taken evening previous. Had also taken some C. C. pills. Had experienced very severe colicky pains in umbilical and right iliac region on night of 13th, but after catharsis felt better. There was now, on deep pressure, tenderness in right iliac region, but no perceptible tumor. Prescribed a stimulating liniment to be applied, and ordered every three hours a capsule containing Chinconidiæ Sulph. and Camphorated Dover's powder, and enjoined complete rest.

On the evening of the 16th, when I returned from an all day's ride in the country, my wife informed me that Mr. B. had been to the office and said Bert was having severe pain again. A messenger was waiting for me to attend an obstetrical case, and I ordered five-grain powders of Camphorated Dover's powder to be administered every two hours until relief followed.

At 5 A. M., 17th, find patient resting quietly from effects of the anodyne. Temperature 100, pulse 90 per minute. Soreness increased and perceptible enlargement in cæcal region. Patient had exercised imprudently the morning before—had swept the floor of his room twice and carried in a hod of coal. Continued anodyne and liniment and ordered hot hop poultices.

18th.—No material change. Treatment continued.

20th.—Temperature, 101½; pulse, 104. Increase in size of tumor. Discontinued former anodyne and give every four hours ½-grain powdered opium, also 1 drop German tincture aconite every hour.

22d.—No material change in temperature and pulse. Tumor now extends from near Pouparts' ligiment to one inch above the crest of the ilium, and internally as far as the external border of the right abdominal rectus and is quite noticeable to the eye. Percussion with moderate pressure gives tympanitic note, while on deep pressure the note is duller. Opium and local treatment was continued. Diet, milk, beef tea, chicken broth, etc. Temperature from now till 29th ranges from 100 to 103½, and pulse from 95 to 120.

Dr. Wright, my partner, has been seeing patient frequently.

On 24th, Dr. Bullard, of Seneca, Kas., saw patient, at which time Quinia and Ammon. Carb. were added to the other treatment.

On 26th there is unmistakable signs of the approach of general peritonitis. Tincture Veratrum was given; opium increased and hot applications used more freely.

The threatening symptoms subsided on 27th, when the veratrum was withdrawn and alcohol added to the carbonate of ammonia. In the evening there were symptoms of collapse and Dr. W. remained with him in forepart and myself in afterpart of the night. Patients feet and hands became cold and pulse very feeble. Gave hypodermatic injection of solution of Sulphate of Atropia and increased alcoholic stimulants.

28th—6 A. M.—Abdomen very tense and tumor difficult to be outlined on account of tympanitic distension.

11 A. M.—Have been summoned hastily; bowels have not moved since the 17th, and Madam Grundy says they must move or the boy will die. I informed the father that any

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A CONSIDERATION OF THE ETIOLOGY OF "CROUPOUS-PNEUMONIA."*

By S. R. TOWNE, M. D., Omaha.

While it is not at present possible to trace so completely the relationship of cause and effect in pneumonia, as was recently done in the case of typhoid fever, it may be profitable to consider some facts and theories with regard to this widely prevalent and fatal malady.

Sixty-eight cities of Europe having a death-rate of 26.7 give a pneumonia rate of 6 per cent of all deaths. In 108 American cities with death rate of 20.4 the proportion was 6.1 per cent. In sixteen others with death rate of 47.4, 4.6 per cent only, from pneumonia. In 190 cities in all, the average pneumonia rate was 5.9 per cent. With the advance in preventive medicine increases also an interest in several stated etiological factors in the production of so fatal a disease. For like all infectious diseases, due, we understand, to the presence and growth of unnatural microbic life within the body, several conditions are necessary for the production of a case.

The occurrence of pneumonia as an epidemic, the study of its "migratory" form, reports from armies in field and barracks, from expeditions, life in prison, convent and school, (the latter showing its coincidence with indoor life), such observations classed it as an infectious malady. When also a great variety of experiments, the inhalation of strong vapors and gases, intra-tracheal injections of ammonia or mercury, even traumatism itself, in a variety of environment by a variety of operators, conspicuously failed to induce croupous pneumonia, the catarrhal form only resulting, its infectious nature was more generally accepted.

Squire's proposition that close rooms and foul air, rather than out door exposure predispose to the disease, the West Indies reporting more devastating epidemics than Iceland; Hirsh proving that the amount of mean fluctuation in pneumonia mortality is in inverse ratio to density of population; the increased frequency and fatality of pneumonia in America coincident with increased density of population; much of the symtomatology of the disease also, nothwithstanding the usual absence of prodromata, incubation period, or regular temperature range, (for instance, the usual initiatory chill, somewhat regular elevation of temperature, typical course and duration, an abrupt crisis, a marked diaphoresis, followed by resolution); lastly, also, what is styled the nervous phenomena, somewhat peculiar—all these facts tend to confirm the theory of the infectious nature of pneumonia. The query here arises as to the nature of the materius morbi.

Klebs claimed in 1875 to have found the morbific agent, styling it the "monas pulmonale," which could by inoculation develop croupous pneumonia. Sternberg, it will be remembered, in 1880 and 1881, at Baltimore, induced fatal septicemia in rabbits by hypodermatic doses of one and one-fourth to one and three-fourths (1¼ to 1¾) c. c. of his own saliva injected into the subcutaneous tissue, death following within 48 hours, as *then* stated infallibly, a small dose acting just as promptly as a large one. The saliva of six Philadelphians in eleven rabbits caused eight deaths, not in all cases so immediately, while the saliva of four students gave negative results. Secondary cases injected from serum or blood of the primary at death were uniformly fatal. Putrefaction nullified this action of the saliva. Certain micrococci were constant in his saliva at that time and also in serum of rabbits treated, both living and dead.

The micrococci were easily destroyed or made inactive by antiseptics as was this action of the saliva and the serum also. Pasteur and Vulpian report similar studies in 1880 and 1881. Friedlinder, in 1882, in eight fatal pneumonias found an oval micro-organism in pairs or short chains in the pneumonic exudate into the alveoli which he considered etiological factors in the pneumonia. Leyden and Gunther, November, 1882, announced the same micrococcus from the exudate obtained with Pravaz syringe through thoracic walls, the elliptical coccus being enveloped in a colorless capsule. Matruy found the same in January, 1883, in 16 cases in pneumonic exudate and in the *sputa* of other diseases, but less abundantly.

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* Read before the Omaha Medical Club.

Friedlander, November, 1883, gave to the Medical Society of Berlin a study upon the pneumococcus, as he then styled it, characterized by capsule, though the capsule was only present, blood and exudate, but not in cultures from them.

Nine rabbits inoculated through the thoraric wall with pneumococcus in distilled water gave negative results. Six out of eleven guinea pigs showed lesions of pneumonia, mice died in 24 hours with lungs congested and foci of red hepatization. Several mice, inhaling a spray containing pneumococcus in suspension, died with typical pneumonia, the pneumococcus with capsule being found in lungs, spleen, blood and pleural serum. This germ, now known as Friedlander's bacillus, was then distributed to the laboratories of Europe as pneumococcus Friedlander.

Talamon, November, 1883, gave his experience at Paris with a microbe like a grain of wheat or barley, a lanceolate coccus. This he found in hepatized lung with Pravaz syringe and also in exudate after death. Inoculated in dogs and pigs gave negative results, but 8 from 20 rabbits inoculated through thoracic wall showed characteristic fibrinous pneumonia.

The lungs presented by Talamon showed this both to the naked eye and microscopically.

See of Paris, in 1885 and others, reported frequent similar experiments, in many of which the oval wheat-shaped coccus of Friedlander and micrococcus salivæ or the *m.* Pasteuri of Sternberg, were confused from their similarity in form. Salvioli, and Klein in his report to the English government in 1885, and even Sternberg were similarly confused, the latter while inducing pneumonia in animals. Differences in results were accredited to different degrees of pathogenic power.

Sternberg found at the laboratory of Pasteur that his salivary *m.* and that of Talamon Salvini and Frankel were really identical, but not the same as Friedlander's bacillus.

Weischelbaum found in 1886, the *m.* Pasteuri in 94 out of 129 cases, and in 9 cases Friedlander's bacillus, and styled it the diplococcus pneumonia.

Wolf in 1887, found *m.* Pasteuri in 66 out of 70 cases.

Netter in 1887, found it in 75 per cent. of his cases, and produced septicemia in rabbits from 60 per cent. of them.

Gamaleia finds that mice and rabbits treated with *m.* Pasteuri, die with septicemia far too suddenly for the pneumonic process, dogs and sheep offering greater resistence; have pneumonia dogs showing all stages complete. Man is thought susceptible in a like degree, having pneumonia from a virus that induces fatal septicemia in rabbits.

This septic power of the saliva is not constant in an individual, nor universally distributed. Sternberg, astonished at the death of rabbits in 1880 in forty-eight hours, finds varying results in the three years following, death coming later or not at all.

Netter finds *m.* Pasteuri in fifteen per cent. of 165 persons. Vignal in his own saliva finds it for two months, and for fifteen days again, after an absence of several months.

Sternberg finds the power of the germ much increased by cultivation in rabbits, when dogs, usually having pneumonia, succumb quickly to septicemia like rabbits. The virus may be weakened by chemicals and by heat in fluids at 107° F., when it is not fatal to rabbits but gives them immunity against strong virus. The sputa of pneumonia convalescents is also weak. From these studies we conclude that pneumonia is induced by a microbe, most usually the *m.* Pasteuri, occasionally by Friedlander's bacillus, just as in typhoid Eberth's bacillus is the necessary factor, and in diphtheria that of Loffler, though the conditions necessary to growth in any of these species is now imperfectly understood; for *m.* Pasteuri, though quite generally distributed among men, seems to require certain preparation of the system in order that pneumonia may develop.

That pneumonia is contagious at times many observers now admit. The collective investigation committee of the British Medical Society of 1884, authorize the following: That pneumonia

1st. Is epidemic in districts.

2d. Is pythogenic where poisoning has occurred from sewer gas or fecal accumulation, and from overcrowding.

3d. Is infectious, often imported into a district, and then spreading from house to house.

Dr. John W. Moore, of Dublin, at the last International Medical Congress, in a paper on "Seasonal Prevalence of Pneumonia," concludes:

1st. That pneumonia has undisputed epidemic prevalence.

2d. That it has proved infectious, and though not styling it contagious, allows, later the discovery of the probable micro-organism as cause, and that we will probably soon speak of "pneumonic fever" as now we do of enteric fever as a zymotic or specific blood disease.

Netter, in a complete and comprehensive study of this disease, styles it a transmissable contagious disease, not as readily carried as the acute exanthemata, and not through air probably, and yet says one should not be confined in bed or close room with a pneumonia patient, nor use his handkerchief.

That the *m.* Pasteuri remains a considerable time in the sputa of the convalescent, Walter P. Geikie at the late Medical Congress, reported of an epidemic at Toronto that there occurred many instances where pneumonia seemed truly contagious. Similar instances are becoming common in the journals: At Providence within a year, a lady dying of pneumonia, in a week two others in the same house, the illness of nurse and physician of same disease following.

Dr. W. B. Rodman, of Frankfort, Ky., in 1875, reported a fearful epidemic in the Kentucky prison. There were 694 men in six tiers of cells having 170⅔ cubic feet air space in each cell, the upper cells so fatal as not to be used. From the filthy habits of the men at night in so cramped space the stench became fearful. Up to January, 1874, seventy-five cases had occurred, but in February the type became pythogenic, twenty-five deaths in ninety-eight cases, twenty of them from the upper tier of cells. Twice before had similarly fatal epidemics visited the prison. Forty negro women in *large, airy* cells had no pneumonia.

The environment was such as to render any illness serious, but that pneumonia *alone* should have been so fatal can only be accounted for by the continued cultivation of the *m.* Pasteuri, and its conveyance from case to case.

Grimshaw and Morse report the epidemic at Dublin in 1884, as probably contagious.

J. E. Graham, of the provinces, concludes pneumonia to be an essential, parasitic, epidemic, and occasionally contagious disease, and then allied to erysipelas.

The *British Medical Journal* editorially on the epidemic at Mylain and vicinity in 1887, allows:

1st. That it occurs in series.

2d. So prevalent at times as to be epidemic.

3d. Occasionally contagious.

Delafield, in 1875, before the County Medical Society, in New York City, in endeavoring to account for the usual prevalence of the disease, showed an evident relationship to cold, the greatest number of cases and deaths following the cold months. Baker, of Lansing, Mich., before the American Medical Association, also before the Ninth International Medical Congress, and in Michigan Board of Health reports, has more fully demonstrated this fact, as true of several diseases, especially of the air passages.

From a study of Michigan health reports for 7 years, and those of London for 30 years, a remarkable coincidence is evident between the temperature curve and the prevalence of pneumonia.

Dr. Baker's theory as to the manner in which cold exerts its influence is by inducing a rapid evaporation from the lungs.

Atmosphoric air at 32° F., if saturated, has 2 grs. of water to every cubic foot of air, while at 70° F. it may contain 8 grs., but at 98°, the temperature at which it usually leaves the lungs, it contains 18.69 grs. per cubic foot.

Expired air containing nine times as much water as inspired at freezing point, the latter reaching the vesicles warmed, but very dry, ready to absorb great amounts from the surface of the vescicles. In this way 8 oz. of water in July, but 11 oz. in January, are evaporated from the lungs daily. This *increased evaporation* leads, Baker says, to an accummulation of the saline constituents of the blood within the air vesicles, principally of common salt, just as it accumulates on the linen of the laborer from evaporation of the perspiration.

These salts become an irritant, calling forth by osmosis albumenous material from the blood into the vesicle. This exudate, Baker supposes, forms a nidus, a culture medium for rapid growth and reproduction of the *m.* Pasteuri, so commonly present in the saliva.

It is a well attested fact that the chlorides normally present in the urine—11 grs. the daily average—are in pneumonia absent entirely, when the sputa contain .592 per cent. of sodium chloride, an amount equal to one-tenth of its solids. Baker asks ingeniously if salt in the diet of families, or regions of country, may not account for epidemics of pneumonia, in part, and account also for its absence in colder regions where salt is not used.

The relation of climate to pneumonia has been a frequent subject of study, but this method of reasoning is peculiar to Baker.

Variability in climate is allowed no force here, while most writers place it high in influence. If Baker is right, why is not pneumonia much more frequent in arid regions like that just west of us, than in the moist air of Michigan, for instance?

Ziemssen made a thorough study, 30 years since, of the distribution of pneumonia, finding it general over civilization, but more frequent, not toward the colder regions, but toward the equator.

Juergonsen, in Ziemssen's Cyclopedia, allows great influence to continental over insular climate, and, like all writers, to spring weather, and to town life over life in the country—in England 20 to 8 in favor of country.

In 1882, in The American Journal of Medcial Sciences, E. Sanders published a most complete article upon the effect of altitude, rainfall, density of population, temperature, longitude and latitude upon the prevalence of pneumonia, with these deductions: That the death-rate increases with the density of population, with a continental climate, which is, of course, more variable, and increases also with the temperature, but only to the thirty-fifth parallel and not as Ziemssen has said, to the equator. Nor do these deductions agree with Baker's theory of cold.

In looking for one constant factor common to most of these conditions, we can fix on only one, that of *variability* in climate, which is certainly of influence in our Spring, when the pneumonia rate is markedly increased, in our modern house-dwelling, and is this one *constant* element in continental climate reaching its acme near the thirty-fifth parallel.

Exposure to draughts of air when heated (Flint's "sudden suppression of cutaneous perspiration.") has from time immemorial been by common consent an acknowledged cause of various acute catarrhs of the air passages. Just *how* this results, as well as the condition called rheumatism or neuralgia, has never been explained.

Complete closure of the skin causes death in a few hours in man or animals, undoubtedly through retention of leucomaines normally exerted by the sweat glands. Its partial closure, as in extensive inflammation from burns or other causes, is also dangerous. A sudden chilling of the surface, no doubt, diminishes this work, and the kidneys we know take up a part of it, vicariously, and when their effort is severe they quite frequently suffer for weeks or beyond repair.

May not the bronchial surfaces or the air vesicles in a *like* manner attempt another part of vicarious work sufficient to paralyze their undoubted function, viz: that of removing foreign matter accumulating there, like disease germs? Such, precisely, seems to have been the observations lately made by Prudden, in connection with his studies in pneumonia attending diphtheria.

That some very active leucomaines are *normally* eliminated through the breath, is well proven by Brown-Sequard, D'Arsonval, Wurtz. The first two found that the aqueous liquid from the expiration of dogs, injected into animals, caused death within twenty-four hours, with signs ot great prostration, very rapid pulse, choleraic diarrhœa, slowness of respiration, dilatation of pupil, all signs of leucomaine poisoning.

There is nothing unreasonable in the theory that the lungs may attempt vicarious work sufficient to paralyze some more delicate normal functions, and allow germ life to secure a foothold there.

That expired air has frequently such an effect we must allow, since in all our study of causes of pneumonia no one agent is so pregnant with results as overcrowding. Not alone is this proven by an increased rate of pneumonia in cities, but when humanity is huddled into a ridiculously small breathing space, marked results are sure to follow, as in the prison at Frankfort, reported above, where the foul odor, depressing as it must have been, had far less fatal influence than the limited breathing space. It was there constantly noted that rapid breathing was brought on by the least exercise along the higher tiers of cells, indicating that the eliminating processes were improperly performed.

In our hospitals how frequently has occurred the "intercurrent" pneumonia as compared with the same class elsewhere.

In 1886, Thomas Darlington, of Kingsbridge, N. Y., attended the workmen on eight miles of the Croton aqueduct, seeing 150 cases of pneumonia. Sporadic cases occurred in the coldest weather, or from traumatism, or from intoxication and exposure At "shaft 20" were Italians thinly clad and exposed to icy winds, and they suffered from rheumatism and a pleuritis that extended to the parenchyma of the lung, mild in type. At "shaft 24" there were fine flinty particles in the air from the rock they worked; they also had mild type barely characteristic pneumonia. But at "shaft 23" were twenty-five cases in ten days, with chill, jaundice, vomiting and fetid diarrhoea, sputa black from inhaled smoke of lamps. This epidemic was in one room, where eighty men slept, forty in day, and forty at night, with *no* ventilation, odor, that of a menagerie, floor even covered with vomit, sputa and ashes. But on the tenth day, the room, floor and clothing being thoroughly cleansed, aired and disinfected, the pest ceased abruptly. In other shanties similarly infected like treatment gave the same immediate result.

This picture doubtless is only an extreme one like what is occuring daily in our private houses even, in winter when pure air is sacrificed to economy, in these days of the steam register, and no open grate to compel ventilation. No doubt much of the pneumonia of to-day may be avoidable as is the typhoid fever. *Under average conditions* we believe the lungs capable of removing a germ like *m.* Pasteuri, without harm to themselves, but when this power is lost, it is from crowd-poisoning, or a self-poisoning. Prudden's experiments have shown this within the year, finding, in broncho-pneumonia, ten cases, *no* bacteria in numbers, in three cases of croupous pneumonia enormous numbers of *m.* Pasteuri but no diphtheria germs (streptococci), and none in normal lungs, but finding, in broncho-pneumonia following diphtheria, enormous numbers of streptococci, just as in the membrane of diphtheria. These were taken from the air vesicles, and a beef tea culture prepared. Fifteen rabbits were treated to one to five c. c. of the culture, injected through the tracheal wall. Three died, but the rest were killed in from three and one-half hours to ten days, to note what nature had done with the streptococci. In three and one-half hours after the injection *none* of the germs *could* be *found* where there was ciliated epithelium, and after twelve hours none could be found anywhere in the lungs, though inflamed points here and there showed where the battle had raged. and the dead and wounded were there as pus and loosened epithelium.

If, however, the bronchial surfaces were previously inflamed with diluted ammonia, these lesions were more marked and extensive, and the streptococci remained larger, showing that bacteria lived with greater difficulty in healthy tissues, as has been repeatedly demonstrated in the various germ diseases, but if introduced upon preexisting inflammation their hold becomes more tenacious.

Just a word here upon the so-called nervous symptoms and heart failure of pneumonia, which appear far too soon to be due to simply overwork in forcing on the blood column through hepatized lung. We have seen how fatal the expiratory vapor of animal life may become, when deprived of its carbonic acid it is injected directly into the tissues. Now, when the leucomaines are retained in the blood they must, of course, exercise the same depressing influence. Indeed, we know by experiment that the blood of a pneumonia patient will exercise this influence. The reason is plain. A half or three fourths the natural lung power proves insufficient for their elimmation, leucomaine poisoning this would become.

But again: How depressing those alkaloids, the *ptomaines* have been proven to be when remaining in the system, as in typhoid and diphtheria, cholera and septicemia, when not the high temperature, (high temperature may indeed be nature's remedy, her attempt at distruction of germ life) but, in all probability, the *ptomaine* is the depressing element in the disease!

So in pneumonia, then, we have another germ disease and for its product other alkaloids.

May not these facts account for those sudden deaths from pneumonia in forty-eight or even twenty-four hours, though without the putrid external appearance of septicemia and diphtheria.

From the above considerations may be made the following deductions:

That pneumonia is unquestionably a germ disease.

That what Sternburg styles micrococus Pasteuri is *the* usual pneumonic germ.

That as the germ is quite generally distributed some additional factors are eminently necessary that a case may develop.

That overcrowding in cities, hamlets and households is an especially fruitful factor.

That variability as observed in spring months, in continental climates and modern house dwellings may have great influence, possibly by throwing sudden vicarious work upon the respiratory organs sufficient to paralyze their eliminating power, allowing germs a foothold.

That such a process seems to the writer more in accord with present knowledge, than Dr. Baker's theory of cold, which would make pneumonia more prevalent in high and arid regions of our continent.

ENCYSTED EMPYEMA FOLLOWING PLEURO-PNEUMONIA.*

By B. F. CRUMMER, M. D., Omaha.

The subject furnishing this clinical report and autopsy was a man aged 39 years, who had followed an indoor occupation for a long time, and was aware of an increasing debility and loss of health. During the fall he worked ten or twelve hours a day in an exceedingly hot and illy ventilated corner of a store, near a large radiator. He noticed that the air was very dry and charged with particles of fine dust. He was in the habit of leaving this while warm and walking about a mile to his residence to meals.

January 11th he was seized with a violent pain under the right nipple, extending through to the back and attended with chilliness and moderate dyspnœa, and was taken home in a hack. A physician gave him some treatment, including hypodermics, but made no physical examination of the chest, and called the case neuralgia. No record of his case was kept for one week, and when I saw him at the end of this time he was very sick, having taken but little nourishment and sleeping badly at night. His pulse was now 136, T. 102 F., R. 40. The pain was not so acute as during the first few days, but still quite severe. Physical signs were: loss of motion on right side of chest, irregular dullness over same region, especially on deep percussion and bronchial breathing of an irregular distribution, but most marked over anterior surface of right side. No rales, some slight friction sounds heard for a few days. No cough was present during the first five weeks of the attack. Diagnosis, pleuro-pneumonia. The treatment was little else than tonics, stimulants and a nutritious diet, all of which he took well, kept a clean tongue, and had a natural movement of the bowels daily. During four weeks his temperature varied from 100° F. to 102.5° F.; P. 120 to 130 per minute, and of a rather irritable, ominous character. About this time, or five weeks from the onset of the disease, he developed some cough, the general aspect of the case was not so good, and the physical signs betokened an effusion some where in the right side of the chest.

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* Read before the Medical Society of the Missouri Valley, March 20th, 1889.

The heart impulse was displaced downwards and to the left two inches. Numerous punctures were now made, both with the hypodermic needle and the small needle of the aspirator, but with entirely negative results. Most of the punctures were made over the posterior and lateral aspects of the chest. Indeed the physical signs of an effusion were most obscure and in some ways contradictory, and I soon became satisfied that if fluid were present it was not free in the pleural cavity. Dr. A. F. Jonas kindly saw the case at this stage, and repeated the exploration with no result. A week later the patient began to expectorate a purulent material stained with blood, one to three ounces a day, and after a time the apex beat returned one inch nearer to the normal line, but the general symptoms did not improve. The action of the heart grew more rapid, and at times tumultuous. Some localized pleuritic trouble was manifested over the anterior surface of the left lung. Large metastatic abscesses formed over the hip and shoulder. These were evacuated and did not refill. Patient died from exhaustion on the sixty-fourth day of the disease.

The autopsy, in which I was kindly assisted by Drs. Jonas and A. B. Somers, revealed the fact that all the lower portion of the chest had been shut off by extensive pleuritic adhesions. No pus in the pleural cavity. There was a large area of irregular softening anteriorly under the third, fourth and fifth costal cartilages, and having its left border near the left border of the sternum. This abscess was quite distinctly limited by adhesions around the edges. The lung substance in its vicinity was extensively softened and decrotic, and the costal pleura eroded and absorbed over a surface three or four inches across.

In our search for this pus cavity we had passed our needle in numerous places just below it or posterior to it, and yet it is plain that a puncture near the sternum in the third or fourth interspace would have detected the location of the pus. Some large bubbling rales had appeared during the last ten days of life when the patient was lying down, but were absent in the upright position.

Whether a paracentesis would have availed anything in this location may be considered questionable on account of the great involvement of the lung, and the bad general condition of the patient. I know of no case where a permanent opening has been made into the chest in this situation. My firm impression is that this was a case of interlobar abscess which gradually penetrated to the front of the chest.

The left lung was also found adherent in front over a large extent of surface, and the lung in a state of hepatization, more recent than the change in the right. The heart was hypertrophied, and the pericardium extensively inflamed and thickened.

This case is a typical example of the class of cases described by Germain See as *infectant* pneumonia. I need not call the attention of the gentlemen present to the fact that we seldom get abscess as the result of croupous pneumonia, and the secondary or catarrhal pneumonias are not often associated with pleurisy or pus formation.

The history and symptoms of my case differ greatly from the ordinary forms of empyema, in which there is usually only compression of the lung, which, if soon enough relieved, reasserts its power to expand. But in my case we have an aggravated adynamic inflammation involving lung and spleen, and later the heart and pericardium. In other cases the meninges of the brain, or the kidneys are the organs involved. Formerly we talked of a heart complication or a brain complication in these cases, while we now know them to be simply varied localizations of the same cause that induced the pneumonia. If pneumonia has become more fatal of late years, and it seems to me the evidence is strong that it has, the fact is probably attributable to the increasing frequency of this class of cases, and if Germain See has by his rather arbitrary classification done nothing more than to elucidate the etiology and pathology of these cases the profession owes him a debt of gratitude.

DISCUSSION.

After reading his paper, Dr. Crummer said:

There was one point in the autopsy not fully elucidated, and that is the condition of the heart and pericardium. The lungs were in such a condition that it was deemed best not to attempt to save them, but I have here a beautiful illustration of acute fibrinous pericarditis, with hypertrophy of the ventricular walls. A heart which has been pounding away at the rate of 130 to 160 per minute, for sixty days, against great resistance, becomes hypertrophied. There is no doubt but that the heart was normal at the beginning of the disease. The effusion into the pericardium was slight. Dr. Jonas saw this case three or four times in consultation, and assisted in the treatment of it.

Dr. A. B. Somers.—I think Dr. Crummer has treated this suject so exhaustively that there is but little farther to be said. The specimen speaks for itself.

I did not see the patient while living, but I can see that it would be difficult to make a diagnosis on account of the dullness being continuous over the entire region covered by the heart on the left, and on the right by the hepatized lung, so that there was an excessive region of dullness, and it would be difficult to puncture the right place. In fact, to get at this abscess, they would either have to penetrate the sternum or inter-costal spaces near the sternum at a point very near the heart, when that organ was in its normal position.

Dr. A. F. Jonas.—It seems to me this is a case that should elicit discussion. These are a class of cases which are met with not infrequently, and they present a great many symptoms which from a diagnostic standpoint are easily recognized. I have seen quite a number of them, but never saw one exactly like the one under discussion. In this, all the diagnostic signs usually found were absent, that is, so far as physical signs were concerned, although we had been satisfied for some weeks that we had to deal with a case of encysted empyema, it was impossible to locate its exact situation.

These are very important cases, because, unless discovered, they end fatally, unless nature makes provision by a perforation externally or into the bronchi. Certainly every gentleman present has had something to do with such.

I have nothing to add to what Dr. Crummer has stated in his paper, yet it would be interesting to discuss the diagnostic signs in encysted empyema.

Dr. Macrae.—Did you use the aspirator needle more than once?

Dr. Crummer.—In one or two different places half-a-dozen times, mostly in the mid-axillary line and post-axillary line. I think I passed it once in front, perhaps a little too early to enter the abscess.

Dr. Macrae.—I have heard lately of a case where the needle was used thirteen times, and it did not enter the pus cavity until the thirteenth time.

Dr. Crummer, in closing the discussion, said: I think one thing which will possibly excuse the failure to find the pus in this case is that it was not simply one of encysted empyema. In the first place the patient would propably not have died in sixty days, from that disease; it will run longer, even when not attended to at all. Undoubtedly lung lesions existed from the beginning, and should be considered as one of the elements in the fatal termination. You take even a subject with general empyema on one side of the chest cavity, without any treatment he will hardly die inside of sixty days.

In this case, cuts through the lungs showed red and gray hepatization, even away from the abscess cavity. My impression is that the collection of pus began as an inter-lobar abscess, and that possibly only during the last two weeks of the man's life did it approach the surface in any large quantity.

BARON LARREY.

By H. E. W. Barnes, M. D., Macksburg, Iowa.

Some time ago I had the pleasure of reading the "Memoirs of Military Surgery and Campaigns of the French Armies, by Baron Larrey, translated by Dr. Hale, 1814," and made notes of a few among the many cases detailed by him that will give the reader an insight into the treatment adopted by that wonderful man. In one case he borrowed an idea from the Esquimaux (having witnessed them apply it when surgeon on board the ship "Vigilante"). It is interesting as throwing a side light on the geneses of a treatment that survives to-day in the "black cat skin." I quote from vol. II, page 270, case 1st, the first campaign in Spain, 1808:

"The Marshal Duke of Montebello, while riding carelessly with the Emperor, was overturned, together with his horse, on Mount Dragon, a rough mountain covered with frozen snow. His horse in attempting to rise fell on his thorax and abdomen and injured him considerably. On arriving at Vittoria he was covered with ecchymoses, his abdomen was inflated and tender, he labored under acute pain of the bowels, difficulty of respiration and suspension of voluntary motion. His pulse was small and tense, his face pale and discolored, his eyes heavy, voice feeble and extremities cold. The slightest touch of the abdomen produced acute pain and oppression. Every symptom proclaimed an incipient inflammation of the internal organs. Venesection and tonic resolvent embrocations would have proved insufficient, and experience had taught me that they are not adequate to arrest the disease that generally follows severe contusions and concussion of these organs. I recollected the surprising cure made by the Esquimaux on the sailors of the "Vigilante," who were dashed with their boat against the rocks on the coast of Newfoundland, a practice that I have since tried successfully in several similar cases.

I resolved to wrap the body of the Marshal in the skin of a large sheep, taken warm from its back while the animal was still alive. (In order to deprive the animal of sensibility it was stunned by a blow on the neck, and two expert butchers immediately flayed it.) While the butchers were flaying the animal, I prepared and applied a very warm embrocation of camphorated oil of chamomile over all the surface of the Duke's body, and immediately afterwards enveloped him in the reeking sheep skin, which was still covered with a copious serous fluid. I adapted it closely to his body and confined the edges. Warm flannels were then applied on his extremities. I desired him to take freely of light tea, together with lemon juice and sugar. The Marshal wás immediately relieved, but he complained of a painful pricking and the attraction that the sheep skin seemed to exert on his body where they were in contact. But these effects were soon over, and he fell asleep in ten minutes and remained so for two hours.

When he awoke I removed his animal cloak, wiped off the sweat that trickled down his body with a warm cloth, and applied an embrocation of warm camphorated brandy. I applied some compresses dipped in this fluid on the parts most severely injured. Prescribed cooling mucilaginous drinks, ethereated milk of sweet almonds and emollient camphorated enemata. At 8 o'clock next morning the swelling of his abdomen had subsided, and was less painful. His pulse was more natural and his functions restored. His urine, which at first had been suppressed, was thick and bloody. After premising several cups on the parts affected with ecchymoses, I had him put into a warm bath. This was repeated with aromatic embrocations. The same medicines were continued with suitable variations, and he was able to set out on horseback the fifth day."

His method of treating traumatic tetanus, while heroic was effective. At the battle of Elchingen, May 21, 1809, "a ball struck Francis Dunman and carried away the skin and part of the spine of the right scapula, with a portion of the trapezius and of the infra and the supra spinatus muscles. The division of the strangulated aponeurotic ligaments and the excision of the disorganized flaps was made on the field of battle. Some loose pieces of bone were also extracted at the same time and the wound dressed with a split roller, etc. as usual. Suppuration went on without any unfavorable symptoms and the wound began to heal around its edges. when he was suddenly seized with tetanus which, like an electric shock, extended from the wound over the whole nervous system and in a few hours he was in a state of complete opisthotonos. His head was thrown back on the shoulders, the jaws locked and deglutition very difficult. I immediately prescribed diaphoretic drinks and large doses of opium, camphorated oleaginous and narcotic applications were made to the whole surface of the body, the dressings were mild and applied over the wound without touching it. In short, every remedy and care was lavished upon him, the secretion of pus was suspended, the edges of the cicatrix enlarged, and in forty-eight hours the wound was half its former size. He then complained of a painful compression in every part which had healed. He told us the edges of the wound were as painful as if forcibly seized with pincers and the slightest touch on this very delicate cicatrix, more particular with metals, made him utter the most acute cries.

The symptoms of tetanus were evidently becoming more and more alarming; the superior extremities were uncommonly rigid and drawn backwards; the cervical vertebrae were thrown into a curve posteriorly, and deglutition was quite obstructed. In vain we extracted two incisors to introduce the tube of the sucking bottle. Not a drop of fluid could pass into the æsophagus, and when clear water was brought near him he fell into convulsions; he had the greatest dread of it, as I have often seen in cases of tetanus; the salivary foam was augmented at this critical time, and all the symptoms increased to an alarming degree, and he still had no symptoms of delirium. It now appeared impossible that he could survive twenty-four hours if some efficient remedy was not adopted. I now ordered four large irons to be brought to a white heat, and applied them in immediate succession over the whole wound, and particularly on the parts of the cicatrix, where I suspected that some branches of the accessory of Willis (the spinal nerve) were compressed and enlarged. This application was very painful, but I persisted in it until every part of the wound was deeply and completely cauterized. This was scarcely done when a copious perspiration took place and the symptoms were arrested. He sat up without assistance and called for a drink. His jaws relaxed spontaneously. I gave him a glass of nitrated milk of sweet almonds, in which was mixed sixty drops of laudanum and a few drops of Hoffman's anodyne liquor. I ordered the camphorated narcotic liniment to be repeated and his body wrapped in very warm flannels. An abundant critical sweat followed; he became calm and enjoyed several hours of easy, refreshing sleep. On the following morning I found him free from all symptoms of tetaneus, with the exception of a slight stiffness about the jaws and spine; the dressing of the wound was mild and simple, and applied with the greatest delicacy; the eschars sloughed off between the ninth and tenth days, and the cicatrix then commenced without pain.

He improved daily, and his cure was complete within sixty days, when he set out in good health for France. A degree of stiffness in the motions of the shoulder and arm of the wounded side still remained. This case is among the most remarkable in military surgery."

In his graphic and realistic narration of surgery on the field of battle, with all the attendant horrors of pre-anesthetic days, in the dead of winter, we have a glimpse of the skillful surgeon, the humane and noble man whose brilliant conduct where "woe treads the heels of woe, they come so fast," crowns him a hero and triumphantly demonstrates that "Napoleon I" knew men when he appointed Baron Larrey surgeon-in-chief of his armies. The battle of Eylan occurred February, 1809. At the close of the second day's fight he says: "Being aware that the enemy had halted on the hill, which commands the Eylan at the entrance of the forest, the guards and the corps of the army which followed it, passed the night in *bivouac*. The cold had now become intense, (the snow was about three feet deep,) the thermometer had fallen 15° below zero. At daybreak our troops, having reconnoitered the enemy without being able to judge of his force, descended the hill that fronts the basin of Eylan into which the entrance is through a very narrow defile. This basin, then filled with ice and snow, is a handsome lake of water in the summer season. The advanced guard moved towards the enemy, and the imperial guard, with some other divisions of the army, *deployed* on this basin. The Russians finding themselves strong and in a favorable situation, prepared to make a general attack on our troops.

A brisk cannonade very soon commenced on both sides, the two armies approached and the battle became very bloody, the victory was doubtful, when a vigorous charge from the imperial cavalry decided the fate of the day in our favor. This battle was as severe as I ever witnessed. Although the infantry of the guard was not engaged it suffered very much from the fire of the artillery.

In the morning I had placed an ambulance in the barns which stand on the left of the road as you enter the city, but unfortunately, they were open on every side, the straw having been removed for the horses, we were obliged to lay our wounded on this straw mixed with snow, and a large number of the guards of the line were collected here. I then attended to the imperial guard, but according to a rule which I established, dressing those first who were most greviously wounded without regard to rank or distinction. The cold was so intense that the instruments frequently fell from the hands of the pupils who held them for me during the operations. Fortunately, I enjoyed an unusual vigor, doubtless produced by the great interest which I felt for the safety of so many brave fellows.

The desire which we all felt to save the lives of the wounded enabled us to persevere in the discharge of our difficult duties. Night came on and we had not been able to satisfy the cravings of nature. In the midst of such heart-rending scenes how could we attend to anything but the performance of our sad but humane task? While I operated on one, I heard the most pressing calls for similar services on every hand. After the operation a surprising calm and a kind of internal satisfaction succeeded to the cries of these soldiers, which they expressed by the most lively acknowledgements.

In the midst of such endless obstacles as were here presented by our local situation and the severity of the cold I was still enabled to perform several delicate and difficult operations, such as amputation of the arm at the shoulder joint, and of the inferior extremities where it is not common to perform it, with numerous sutures of the face, for the complete division of the soft walls of the mouth, also of the nose and ears.

Just as the spirits of our wounded began to revive, the right wing of the enemy made an unexpected movement to attack our left where our *ambulance* was stationed. Those of the wounded who were able, fled; others attempted in vain to follow them in order to escape this unexpected attack of the enemy. But we encouraged them and resolved to die rather than seek an ignominious safety. I made haste to finish the section of a leg which I had already begun, and declared to the wounded my fixed determination not to abandon my post. All my pupils rallied round and promised not to desert me. In this difficult conjunction, M. Pelchet, the officer who directed the *ambulance*, arrested the flight of his invalids and wounded. He also found means, even during the greatest want, to procure the provisions which were necessary for our wounded and those of our line. Here also the flesh of the horse was advantageously used to make broth. An impetuous and well-timed charge on this column of the enemy by the cavalry of the guard, through whirlwinds of snow, prevented the consequences so much dreaded by our wounded. All again became quiet, and we were enabled to resume our operations. All the severe wounds of the guards and a great portion of those in the line were operated on and dressed within the first twelve hours. Until then we could take no repose. We spent the remainder of the night on the frozen snow, around the fire of the *bivouac* of the *ambulance*.

I never passed such a painful period, never had my mind been so much affected! I found it impossible to suppress my tears even while I attempted to support the courage of the wounded. I had the mortification of seeing several of them die whose wounds required amputation of the thigh at the hip joint, because the unfortunate circumstances in which we were placed, the excessive cold, and the want of room prevented me from performing these operations, which are in themselves difficult and dangerous. The loss of these brave fellows corroberates the opinion that I have advanced of the necessity of performing these operations in similar cases."

I offer these notes from Larrey's book to the profession because so few have had the good fortune to read his memoirs, as it is a very rare work, and because it seems to me a proper understanding of the present position of medicine and surgery requires a knowledge of the masters that have preceded our generation, and because it can truly be said of him as is inscribed on the urn that contains the ashes of Prof. S. D. Gross, "His memory shall exhort and his example shall encourage and persuade those who come after him to emulate deeds which, great in themselves, were all crowned by the milk-white flower of a stainless life."

A CASE OF RHEUMATISM.

By G. L. Humphreys, M. D., Kearney, Neb.

This may appear to many of my readers a hackneyed subject, and one about which nothing new can be written, but the case whose history I am about to relate is, to my mind, quite unique and out of the general run, and whose parallel only comes once, if at all, during a man's professional life time. The subject of this attack was 22 years of age, extremely nervous, irregular as regards habits of sleep, and addicted to smoking cigarettes immoderately, consuming an average of twenty cigaretts daily, and invariably inhaling the smoke. When I first saw him he had been sick about one week, was actually delirious, had four or five joints inflamed and swollen, and had slept very little, if any, for four days, his temperature was 101°. His attending physician having exhausted the powers of potassium bromide and given large quantities of morphine with negative results, I suggested sulphonal in twenty grain doses, with the effect of producing prolonged sleep, my patient awakening in the morning without delirium. He was then put on five grain doses of salol four times a day and all opiates interdicted, and sulphonal continued at night. My colleague being himself prostrated with inflammatory rheumatism, I took charge of the case. I found that during the first week he had been unable to void his urine, and a catheter had been used a few times, when the trouble disappeared. It now came on again, and the catheter had to be used four times a day, when this had continued about a week, and no improvement manifesting itself, I gave strich. sulph. 1-60 grain., Ergot fluid extract, drahm doses, three times a day, and injected the bladder several times with cold water, after the plan of Sir Henry Thompson, with a happy relief of this distressing symptom.

After a period of four days without rheumatism, he suffered a relapse, and again became helpless. He was immediately put upon the same general plan of treatment along with tr. ferri chlor. in twenty drop doses, combined with half this quantity of dil. phosphoric acid mixed in water and syr. of lemon. He now became subject to attacks of melancholy, and would contract his eyebrows, as though in fear, and cry when any one went into his room and would repeatedly ask them to go out, becoming irritable and slamming the door violently if any one conversed in an adjoining room. His arthritic trouble all disappeared; his skin became cold, clammy and sallow, and his pupils were widely dilated. He gradually settled into a condition of apathy, and would talk to no one, and would stand before a mirror for hours if allowed to do so. His mouth hung open; his eyes were vacant, and he had a fixed idiotic expression. On one occasion he tried to cut his throat with a pen knife, but owing to its dullness and his mother's prompt interference he did not succeed in injuring himself beyond a small scratch. His treatment now consisted of his iron tonic; sulphoral at night, without which he could not sleep, and a glass of beer at bedtime. About this time it was concluded to try a change of scenery, and on the day of his departure he was carried against his wishes into a carriage and put on a train for his former home, after which he quickly began to mend, and in the course of two weeks was himself again. The rheumatism and relapse occupied four weeks; paralysis of the bladder lasted one week, and his mental condition occupied two or three weeks longer. Whether this was a case of disordered nervous system from inordinate use of tobacco; whether it was due to the prolonged use of the catheter exciting urethral irritation, or whether it was a rheumatic condition with effusion into the brain, the writer is at a loss to know. The widely dilated pupils seemed to point to the latter hypothesis, and he was treated accordingly with a happy result. I find several cases of melancholia following rheumatism in the literature of the subject, but this case seems to me worthy of record on account of the number and gravity of complications.

Miscellany.

THE ODOR OF SOUND MEAT.—The examination of the flesh of animals, from which the viscera have been removed, necessitates the analysis of all the tissue, fasciæ, pleura, and peritoneum, spinal cord, glands, vessels, blood, etc., before the meat can be accepted. In the normal state the flesh of every animal has its own characteristic odor. Beef has a special insipid kind of smell, modified, by the different modes in which the animals have been fed. Thus it is stated that the flesh and milk of cattle in the polar regions have a fishy odor, because the absence of pasturage obliges the inhabitants to feed their oxen and cows on fish. Veal smells of milk, mutton, of wool and sometimes grease. The normal odor of pork is insipid and inoffensive, but when the pigs are fed offal the flesh has a pale cachectic hue, and an offensive smell and taste. The odor of poultry fed on corn differs from that of poultry artificially fattened. In a diseased state, meat emits a typical odor resembling the breath of feverish patients. This odor is particularly noticable beneath the shoulder, and in the muscles of the inner side of the leg. The odor should be carefully noted immediately after the incision is made. This should be done by the inspector himself. When diseased meat is roasted it emits a strong and offensive smell. The fever odor is particular marked in the case of animals which have suffered from peritonitis, carbuncle, morbid symptoms following parturition, or acute disease. In such cases the smell is recognized at once, and it is unnecessary to make an incision. "Feverish" meat is always unfit for consumption, on account of the leucomaines which it may contain. Moreover, there always exists pathological lesions which denote clearly that the animal was diseased before being killed.—*British Medical Journal.*

URIC ACID AND MENTAL DEPRESSION.—Haig (*Practitioner*) believes that he has established that there is a relation between retention of uric acid in the blood and a state of mental despondency. When uric acid is present in excess, depression of mind and irritability of temper are marked, but give place to a feeling of mental buoyancy when the excess is gotten rid of. Many suffer from mental lassitude and depression in the morning between breakfast and lunch. It is at this time that the acidity of the urine is least, and that the excretion of uric acid is normally at its greatest. Alkalies will produce artificially this condition of things by washing an excess of uric acid into the blood. By administering mineral acids in sufficient quantity to neutralize the excessive alkalinity of the blood, the mind clears and a feeling of well-being replaces despondency and heaviness. A strongly alkaline state of blood permits solution of uric acid in excess, which, in its turn, brings about mental depression. Coincident with increased alkalinity of the blood, excretion of uric acid by the kidneys is proportionately in excess of the average. A dose of mineral acid will drive the uric acid out of the blood and diminish its excretion in the urine. Shooting pains in the joints very commonly accompany the disappearance of the uric acid from the blood. The occasional administration of mineral acids will not always cure headache produced by excess of uric acid. It is important that flesh food be eaten sparingly. Stimulants must be avoided. In severe cases the diet must be restricted for months to bread, butter, milk, potatoes and fruits. At the beginning of treatment, the washing out of excess of uric acid may be hastened by gr. xv of sodium salicylate three to four times daily. In some cases a single dose of gr. xx at bedtime is sufficient.—*Polyclinic.*

THE TREATMENT OF CARBUNCLES.—The method of crucial incisions has long been a favorite method of treating carbuncles, and certainly, when thoroughly done, greatly abbreviates the duration of the malady. Some time ago I remember to have read in some medical journal, a recommendation not to poultice a carbuncle when opened, but to apply a large sponge wet in some disinfectant solution, carbolic acid or corrosive sublimate. This is a very sensible procedure, as I can testify from experience. The sponge should be large enough to completely cover the carbuncle and may be cut into shape so as to fit over it like a cap. Before being applied, it is dipped into a sublimate solution, 1 part to 2000, or a two per cent. carbolic solution; a little iodoform may then be dusted into the cavity of the carbuncle; down to the bottom of the incision, and the sponge is then adjusted by a few turns of a roller bandage. There is no need of poulticing, for pain and tension are removed by the incisions; the microbes are more effectually stopped in their destructive depredations by the antiseptic liquid which is thus enabled to penetrate every part, than they can be by any other method; the dead shreds of tissue will rapidly separate under the disinfectant dressing, and all the discharges will soak into the sponge and be kept from putrefaction. Night and morning the dressings are renewed; the sponge, full of purulent matter and debris, is thrown into a bucket of boiling water, and afterwards cleansed and again soaked in the sublimate solution for a fresh application. Simultaneous with the separation of sloughs, granulations make their appearance, and *restitutio ad integrum* rapidly takes place —*Medical Age, May 25, 1888. International Journal of Surgery.*

THE OMAHA CLINIC.

The Editor would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

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OMAHA, AUGUST, 1889.

THE ELIXIR OF YOUTH.

Brown-Sequard, an eminent physician and physiologist of Paris has electrified the world by announcing the discovery of an "Elixir of Youth," which he claims is quite capable of rejuvinating old age, of turning the wheels of time backward, ten, twenty, and even thirty years. He has demonstrated to his own satisfaction not only by experiments on animals but also by some fifteen experiments upon himself that tissue juices extracted from the testicles of animals when injected under the skin of man will greatly increase the functional power of the brain, spinal cord, muscular and glandular systems. The individual becomes capable of the mental activity of his early manhood. He can read, write, think, as he was wont to do many years before. There is increased physical powers. One can walk, ride and work as he has not been able to do for many years.

Even the functional activity of all the glandular structures of the body are in great measure restored, dyspepsias and constipation are relieved, and last, but not least, the sexual powers which may have been in abeyance for a long period of time, are restored in a remarkable degree. In fact there is a general reinvigoration and rejuvination that borders on the miraculous.

The fact that this "Elixir of Youth" will restore "lost manhood," resulting from excessive indulgences in early life or through the natural influence of old age, has set the male portion of mankind ablaze with interest and put them on the *qui vive* of expectation. Many a rake and old man shaking with palsy, and with one foot in the grave, as he comes to know of this great boon to such as he, is ready to lift his voice in praise and shout hosannas to the great discover who has lengthened the life of man to an hundred years, full of health and pleasurable existence.

Vive la Brown-Sequard, greatest of modern times!

⁂

Brown-Sequard injection is prepared as follows: The testicles of dogs or guinea-pigs are cleansed of their capsules, three or four times their volume of distilled water is added, they are thoroughly triturated in a mortar and filtered. When filtered through a paper filter the liquid is of a reddish hue and opaque. It is almost clear and transparent when a Pasteur's filter was employed. The latter liquid is followed by less pain and other bad effects. A cubic centimeter is sufficient for a single injection.

⁂

Local physicians are making arrangements to test for themselves the truth of M. Brown-Sequard's assertions, the results of which will be given in the Clinic.

James Carter, M. D.

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The secretary of the above association has addressed the following letter to its members:

Omaha, Neb., Aug. 1, 1889.

Dear Doctor: The Medical Society of the Missouri Valley holds its next annual meeting at Omaha, Thursday evening, Sept. 19, 1889.

It is especially desirable that this meeting shall be one of unusual *interest* and *profit* to those in attendance. Can you not help along the good work by writing a paper, reporting a case, or exhibiting some pathological specimen? If unable to do this, come prepared to take an active part in the discussions.

Please send in titles of papers at an early date.

Let each member exert himself to make our first annual meeting a grand success.

Sincerely yours,
James Carter, Secretary.

We reproduce this letter here in order to again call the attention of our friends to the importance of keeping in mind that the date of the next meeting is September 19th, 7 p. m., and the place of meeting is Omaha; that there occurs the annual election of officers.

Do not forget to send along the titles of your papers.

This society is in a very flourishing condition, and the membership numbers over 110, with more still coming. There is much evidence of enthusiasm, and a disposition to do good, hard, earnest work. Let everybody be imbued with this spirit that the harvest may be rich. JAMES CARTER, M. D.

ALL members of the Nebraska State Medical Society, who wish to have the proceedings of 1888 bound with the proceedings of 1889, will please mail the same to the publisher of this journal at once. Please mark your name and address on the package in order that a perfect record can be had and to avoid errors. The society proceedings of 1888 can be detached from THE OMAHA CLINIC by taking out the wire binders. Do not send the entire journal, but only the entire proceedings. If you have only a part of the proceedings send what you have, and we wil endeavor to complete the same for you. Your early attention is called to the matter.

OUR readers will be interested in Sequard's own account of his experiments with the "Testiculer Fluid," which we reproduce in this number of THE CLINIC.

WE understand that the officers of the Railroad Surgeons' Society of Nebraska are making extensive preparations to make the yearly meeting at Omaha, October 1st, a grand success. We are authorized to invite all reputable practitioners of Omaha and the state to participate. The secretary desires to send a special invitation to railroad surgeons who live in adjoining states, especially Iowa, to put in an appearance. Particulars of the meeting will be given in our September issue.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,
208 So. Fifteenth Street, Omaha, Neb.

Correspondence.

QUININE DOSES.

EDITORS OMAHA CLINIC:

A report of the meeting of the Omaha Medical Club, as well as an editorial (Carter) contribution to the pages of the July number of the OMAHA CLINIC treat upon the administration of quinine in malaria. Two very striking phases of these reports caused the penning of these lines. In the first place, the fact that the majority of those expressing themselvee upon this subject favored the administration of from 7-15 grains of quinine daily, as the maximum dosage, safe and effective; on the other hand, from personal acquaintance with most of the gentlemen, the knowledge is gained, that their experience was mostly garnered in such countries as Nebraska, where malaria in its severer types is a very infrequent visitor, though by no means a stranger, as I will presently show; finally the well known *nihilism* in medicine of the aforesaid editorial (?) writer—all these, so entirely opposite to a life-long experience, induced me to ask space for—*altera pars.*

Sometime in 1874 my clerk handed me a prescription written by a Dr. P., the contents of which: *10 grs. of quinine, 1 gr. of capsicum per dose for an eight (8) year old boy!* I sought the doctor for an explanation. With a smile, he asked me whether I had not heard of the methods of quinine administration advocated by the "Cleveland school?" I had read the articles of Dr. Salisbury regarding the origin of malaria, but had not learned of the *practical* outgrowth of this doctrine—the large doses of quinine. Well, I investigated, and found that quinine exerts its *highest* antipyretic influence about *6 hours* after its administration. I was highly impressed with the likeness of the glyco-taurate, manufactured by the liver and contained in the bile, with quinine, and concluded that the thing, whatever its nature, which caused the ague, certainly interfered with the manufacture of this natural ingredient of the bile—taurin; that quinine, being chemically equivalent (less sulphur) to taurin, *substitutes* this product of the liver function, when administered; that taurin, an albumen derivation, is not excreted with the fæces, but serves some object in the economy—that it seems to go to the nervous system as a prominent food factor—inducing tonicity—and that quinine will do artificially what this product of the liver function does naturally.

Knowing that the highest reduction of the temperature by quinine takes place about 6 hours after its administration, I very naturally concluded that its most beneficial effect would be manifested when its highest antipyresis was synchronous with the acme of the temperature of the periodic fever, and that the beneficial result would be a two-fold one—first, a lessening of the subjective misery, always the concomitant of high temperatures, and secondly, the abortion (jugulation?) of the periodicity—an acquired condition, otherwise very difficult to control.

The fall of 1878 furnished all the material a most exacting clinician could demand. I had come to Ashland, Nebraska, in the spring, and the summer and fall of that year seemed to furnish to this region all the material necessary for the development of *fever and ague*, such as high temperature, rains and rapidly growing and decaying vegetation. Ague was plentiful and severe in all of the southeastern parts of Nebraska about the same time that the yellow fever was severest in the south—giving rise to an expression of my revered friend, the late Dr. Livingston, that "we were battling with the northern end of the southern plague." Of course, I know that quinine is not a specific for yellow fever as it is for ague, yet I cannot help but think that these diseases are cousins, their kinship growing out of the important relations the liver and its functions bear to both diseases.

As stated, the ague was here in all its glory, so that Michigan and Indiana paled in its Nebraska vehemence. The physicians, many of them, unacquainted with this visitor, attacked him with the doses of quinine extolled by your JULY CONTRIBUTORS; the result in most cases a permanent guest of the ague until "he" was "*froze out*," or until a different course was pursued. To describe this *different course:*

Miss E. D., aged about 20, was taken sick in church Sunday forenoon, culminating in convulsions in the afternoon under a temperature of 105° Fah. The fever and ague had existed for nearly two weeks, getting worse all the time in spite of 2 grain doses of quinine every three and four hours. She was told, upon inquiry, that presumably a recurrence of the paroxysm could be prevented if she would submit to take a rather bad tasting medicine; she consented to take anything. She took Sunday evening, Monday morning, noon and night and Tuesday morning, six hours before the expected high fever, following the chill, a powder consisting of:

℞	Quinine Sulphatis	gr. x.
	Piperinae	gr. ii.
	Ipecac	gr. i.
	Pulv. Rad. Rhei.	
	Pulv. Rad. Valerian	aa gr. v.

This was mixed in a little molasses or sweet preserves and taken. It is true it was a bad dose, yet not comparable with the disease, which it conqnered in this case as well as in many others.

Speaking of bad doses, of which I have been accused many times as being the prescriber, I recall what I invariably answered to such accusation: "If the dose is worse than the disease, do not take the medicine." At the same time I am reminded of the fellow trying to split a log with a pen knife, when I read of doses of remedies for diseases which have the "blame, if they have not the name" homœopathic nonentities. Into the category of such absurdities belongs the statement that "*Fifteen grains of quinine daily is to be considered a maximum dose of this drug.*" The writer advises the thirteen out of the sixteen physicians, who brought forth this "*ipse dixit*" of the editorial writer, to visit Michigan or Indiana at this time of the year, and, if not fashionable enough, avoid "*Paree*" and locate in the "*Milza nera*" districts of Rome, and learn that many people, hundreds of them, in these very districts daily take fifteen grains and many more of quinine "*to keep the chills off.*" I have for weeks, when a boy and clerking in a drug store in Fort Wayne, Indiana, taken that much quinine in twenty-four hours without the slightest bad consequences, except keeping off the chills. Fear overtakes me that I may be misunderstood. I stop to say that 1-2 grains doses of quinine three times a day are generally enough for its stimulant—or stimulant-tonic effect; and fifteen grains a day—even every other day—given in one or two doses at the right time may do away with a slight attack of ague, such as more frequently is met with in Nebraska; but this does not preclude that very severe cases may or do occur in Omaha and elsewhere in the state in the autumn particularly, which will not be relieved by "ten to twenty grains daily," and to say "a fever resisting this amount will fail to yield to any amount of the Peruvian bark alkaloids" is simply slapping the experience of ages in the face. To all those who make such statements, the article "*quiniæ sulphas*" in the many excellent text books on therapeutics will prove a revelation. These people will also learn to avoid speaking of chills caused by quinine, *in consequence ot a derangement ot the nervous system.*

Large doses of quinine diminish the contractile power of the heart muscle, in consequence of which chilliness may occur as the result of "*diminished circulation of the blood,*" in the peripheral part ot the body, being, of course, enhanced by the emptiness of the arteries of the brain. The symptoms of faintness and giddiness are not derangements of nerve function, but the consequence of a lessened blood supply to the brain, and are, therefore, readily relieved by a recumbent position.

More might be said with propriety, and, perhaps, profit, of the statment that typhoid fever cannot be aborted. But "altera pars" is assuming the dimensions of an article; suffice it to say as arbitrarily that typhoid fever can be aborted, Dr. M. would call it *jugulated,* and this *ipse dixit* can be *proven* by

THE COUNTRY DOCTOR.

O'NEILL, Neb., August 16, 1889.

EDITOR OMAHA CLINIC:

The daily press has recorded the birth of quadruplets near here, yesterday morning. No physician attended Mrs. Ojear in her confinement, but I was requested by a relief committee of O'Neill to visit the family. The mother is about forty, and of good physique, French Canadian by birth, and has had seven other children, five of whom survive. Mr. Ojear is an old soldier of sixty-six, born in France, and served in Louis Philippi's army. He was four times married prior to this union, and one of his wives gave birth to twins. The only other record of twins was in the case of Mrs. Ojear's step-mother, so that the father and maternal grandfather of these infants seem to have been somewhat specially endowed. The babies seem to be doing pretty well, though not possessed of strong vitality. There were four good-sized placentæ. The infants weigh four pounds each, and there is one boy to three girls. I suggested that another boy would have made a full house, but the father thinks he has the latter anyway. J. E. SHORE, M. D.

OMAHA, August 5, 1889.

EDITOR OMAHA CLINIC:

In your last issue, under a report from the meeting of the Omaha Medical Club, I was misquoted and was the subject of an attack in a captious editorial [Carter] entitled quinine. It would appear, from what the journal contains, that I always gave a drachm of quinine within four or six hours in malarial cases. I stated at that meeting that I was surprised that the ladies and gentlemen had never found it necessary to give larger doses than from 7–15 grains in 24 hours. That while that might answer very well for the average case, that it had been my experience that the best way to treat some of the cases of malaria of unusual severity with which I had met, on the bottom and vicinity, was to use these larger doses, and that I not only had no bad effects, but was much elated at the results. I said that it was my practice to give these cases bordering on malignancy, these doses, but I did not say nor do I give such doses to ordinary cases. That I gave a quantity of quinine to antidote malaria, as I would an antidote to any poison, in proportion to the quantity of poison to be neutralized.

These gentlemen talked of the antipyretic effect of quinine sought for in these homœopathic doses of theirs (for the sugar-plum philosophers do come up to their dosage per diem), all of which is mere twaddle I stated at that meeting, and I restate here, that to get an antipyretic effect from quinia, that it was necessary that at least 30 grains be given, and it is not decided under 45 grains per diem.

Among these gentlemen are those that have typhoid cases bordering on the three score in one season. I assert that the major portion of these cases of remittents that run a course of from 2 to 4 weeks in hands of many can, by the use of a mercurial, followed by full doses of quinia, be upon their feet in 3 days.

Furthermore, I say that it is absurd to say that malaria is mild here, when we have so much as we have every year, many dying annually from this affection alone, the result of half-way measures in treatment.

J. P. Lord, M. D.

Lincoln, Neb.

Editor Omaha Clinic:

I have been a pretty constant reader of your valuable journal for the past twelve months, and, as I am only a student in medicine, I have gained important information from its many contributions. I find in the July number of your valuable journal an article written by Dr. Protzman, urging the profession of this western country to read, subscribe, contribute to and support The Clinic, their home journal. This meets my views in the entirety, and I will add that if the members of the medical profession will take more interest in their home journal in contributing articles of medical science supported by the small amout of $1.00 yearly subscription, in a very few years we can have a journal equal to any journal in the country. But it takes willingness on the part of the profession to stimulate a good home journal. In conclusion I will say, if I were further advanced in the profession I would attempt to increase the number of its many articles, for the benefit of suffering humanity. Please have the kindness to send me The Clinic, and consider me one of its subscribers.

Yours truly,
H. F. Koehler.

No. 820 B Street.

EFFECTS PRODUCED ON MAN

By Subcutaneous Injections of a Liquid Obtained from Certain Glands of Animals.*

By Dr. Brown-Sequard, F.R.S., Etc.

On the 1st of June last I made at the Societe de Biologie of Paris a communication on the above subject, which was published in the *Comptes Rendus* of that society on June 21, (No. 24). I will give here a summary of the facts and views contained in that paper and in two subsequent ones, adding some new points.

There is no need of describing at length the great effects produced on the organization of man by castration when it is made before the adult age. It is particularly well known that eunuchs are characterized by their general debility and their lack of intellectual and physical activity. Besides it is well known that seminal losses, arising from any cause, produce a mental and physical debility which is in proportion to their frequency. These facts and many others have led to the generally admitted view that in the seminal fluid a substance or several substances exist which, entering the blood by resorption, have a most essential use in giving strength to the nervous system and to other parts. But if what may be called spermatic anæmia leads to that conclusion, the opposite state, which can be named spermatic plethora, gives as strong a testimony in favor of that conclusion. It is known that well-organized men, especially from twenty to thirty-five years of age, who remain absolutely free from expenditure of sexual fluid, are in a state of excitement, giving them a great, although abnormal, physical and mental activity. These two series of facts contribute to show what great dynamogenic power is possessed by some substance or substances which our blood owes to the testicles.

For a great many years I have believed that the weakness of old men depended on two causes—a natural series of organic changes and the gradually diminishing action of the spermatic glands. In 1869, in a course of lectures at the Paris Faculty of Medicine, discussing the influence possessed by several glands upon the nervous centres, I put forward the idea that if it were possible without danger to inject semen into the blood of old men, we should probably obtain manifestations of increased activity as regards the mental and the various physical powers. Led by this view, I made various experiments on animals at Nahant, near Boston, (United States,) in 1875. In some of those experiments, made on a dozen male dogs, I tried vainly, except in one case, to engraft certain parts or the whole body of young guinea pigs. The success obtained in the exceptional cases served to give me great hopes that by a less difficult process I should some day reach my aim. This I have now done. At the end of last year I made on two old male rabbits experiments which were repeated since on several others, with results leaving no doubt as regards both the innocuity of the process used and the good effects produced in all those animals. [This innocuity was also proved on a very old dog by twenty subcutaneous injections of a fluid similar to that I intended to employ on myself. No apparent harm resulted from these trials, which were made by my assistant, Dr. D'Arsonval.] This having been ascertained, I resolved to make experiments on myself, which I thought would be far more decisive on man than on animals. The event has proved the correctness of that idea.

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* From the London Lancet.

Leaving aside for future researches the questions relating to the substance or substances which, being formed by the testicles, give power to the nervous centres and other parts, I have made use, in subcutaneous injections, of a liquid containing a small quantity of water mixed with the three following parts: First, blood of the testicular veins; secondly, semen; and thirdly, juice extracted from a testicle crushed immediately after it had been taken from a dog or a guinea pig. [For reasons I have given in many lectures in 1869 and since, I consider the spermatic as also the principal glands, kidneys, liver, etc. as endowed, besides their secretory power, with an influence over the composition of blood, such as is possessed by the spleen, the thyroid, etc. Led by that view, I have already made some trials with the blood returning from the testicles. But what I have seen is not sufficiently decisive to be mentioned here.] Wishing, in all the injections made on myself, to obtain the maximum of effects, I have employed as little water as I could. To the three kinds of substances I have just named, I added distilled water in a quantity which never exceeded three or four times their volume. The crushing was always done after the addition of water. When filtered through a paper filter, the liquid was of a reddish hue and rather opaque, while it was almost perfectly clear and transparent when Pasteur's filter was employed. For each injection I have used nearly one cubic centimeter of the filtered liquid. The animals employed were a strong and, according to all appearances, perfectly healthy dog (from two to three years old), and a number of very young or adult guinea pigs. The experiments, so far, do not allow of a positive conclusion as regards the relative power of the liquid obtained from a dog and that drawn from guinea pigs. All I can assert is that the two kinds of animals have given a liquid endowed with a very great power. I have hitherto made ten subcutaneous injections of such a liquid—two in my left arm, all the rest in my lower limbs—from May 15 to June 4 last. The first five injections were made on three succeeding days with a liquid obtained from a dog. In all the subsequent injections, made on May 24, 29 and 30 and June 4, the liquid used came from guinea pigs. When I employed liquids having passed through Pasteur's filter, the pains and other bad effects were somewhat less than when a paper filter was used.

Coming now to the favorable effects of these injections, I beg to be excused for speaking so much as I shall do of my own person. I hope it will be easily understood that, if my demonstration has any value—I will even say any significance—it is owing to the details concerning the state of my health, strength and habits previous to my experiments, and to the effects they have produced.

I am 72 years old. My general strength, which has been considerable, has notably and gradually diminished during the last ten or twelve years. Before May 15 last I was so weak that I was always compelled to sit down after half an hour's work in the laboratory. Even when I remained seated all the time, or almost all the time, in the laboratory, I used to come out of it quite exhausted after three or four hours' experimental labor, and sometimes after only two hours'. For many years, on returning home in a carriage by 6 o'clock, after several hours passed in the laboratory, I was so extremely tired that I invariably had to go to bed after having hastily taken a very small amount of food. Very frequently the exhaustion was so great that, although extremely sleepy, I could not for hours go to sleep, and I only slept very little, waking up exceedingly tired. [I ought to say that, notwithstanding that dark picture, my general health is and has been almost always good, and that I had very little to complain of, excepting merycism and muscular rheumatism.]

The day after the first subcutaneous injection, and still more after the two succeeding ones, a radical change took place in me, and I had ample reason to say and to write that I had regained at least all the strength I possessed a good many years ago. Considerable laboratory work hardly tired me. To the great astonishment of my two principal assistants, Drs. D'Arsonval and Henocque, and other persons, I was able to make experiments for several hours while standing up, feeling no need whatever to sit down. Still more: One day (the 23d of May), after three hours and a quarter of hard experimental labor in the standing attitude, I went home so little tired that after dinner I was able to work and to write for an hour and a half a part of a paper on a difficult subject. For more than twenty years I had never been able to do as much. [My friends know that, owing to certain circumstances and certain habits, I have for thirty or forty years gone to bed very early and done my writing work in the morning, beginning it generally between 3 and 4 o'clock. For a great many years I had lost all power of doing any serious mental work after dinner. Since my first subcutaneous injections I have very frequently been able to do such work for two, three, and one evening for nearly four hours.] From a natural impetuosity, and also to avoid losing time, I had, till I was 60 years old, the habit of ascending and descending stairs so rapidly that my movements were rather those of running than of walking. This had gradually changed, and I had come to move slowly up and down stairs, having to hold the banister in difficult stair-cases. After the second injection I found that I had fully regained my old powers and returned to my previous habits in that respect.

My limbs, tested with a dynamometer, for a week before my trial and during the month following the first injection, showed a decided gain of strength. The average number of kilogrammes moved by the flexors of the right forearm before the first injection was about 34½ (from 32 to 37), and after that injection, 41 (from 39 to 44), the gain being from 6 to 7 kilogrammes. In that respect the forearm flexors reacquired, in a great measure, the strength they had when I was living in London (more than twenty-six years ago). The average number of kilogrammes moved by those muscles in London in 1863 was 43 (40 to 46 kilogrammes). [I have a record of the strength of my forearm, begun in March, 1860, when I first established myself in London. From that time to 1862 I occasionally moved as much as 50 kilogrammes. During the last three years the maximum moved was 38 kilogrammes. This year, previously to the first injection, the maximum was 37 kilogrammes. Since the injection it has been 44.]

One of the most troublesome miseries of advanced life consists in the diminution of the power of defecation. To avoid repeating the details I have elsewhere given in that respect, I will simply say that after the first days of my experiments I have had greater improvement with regard to the expulsion of fecal matters than in any other function. In fact, a radical change took place, and even on days of great constipation the power I long ago possessed had returned.

With regard to the facility of intellectual labor, which had diminished within the last few years, a return to my previous ordinary condition became quite manifest during and after the first two or three days of my experiments.

It is evident from these facts and some others that all the functions depending on the power of action of the nervous centres, and especially of the spinal cord, were notably and rapidly improved by the injections I have used. The last of these injections was made on June 5th, about five weeks and a half ago. I ceased making use of them for the purpose of ascertaining how long their good effects would last. For four weeks no marked change occurred, but gradually, although rapidly, from the 3d of this month (July) I have witnessed almost a complete return of the state of weakness which existed before the first injection. This loss of strength is an excellent counter proof as regards the demonstration of the influence exerted on me by the subcutaneous injections of a spermatic fluid.

My first communication to the Paris Biological Society was made with the wish that other medical men advanced in life would make on themselves experiments similar to mine, so as to ascertain, as I then stated, if the effects I had observed depended or not on any special idiosyncrasy or on a kind of auto-suggestion without hypnotization, due to the conviction which I had before experimenting that I should surely obtain a great part at least of these effects. This last supposition found some ground in many of the facts contained in the valuable and learned work of Dr. Hack Tuke on the "Influence of the Mind Over the Body." Ready as I was to make on my own person experiments which, if they were not dangerous, were at least exceedingly painful, I refused absolutely to yield to the wishes of many people anxious to obtain the effects I had observed on myself. But, without asking my advice, Dr. Variot, a physician who believed that the subcutaneous injections of considerably diluted spermatic fluid [In my third communication at the Biological Society I said that both the intense pain each injection has caused me and the inflammation it has produced would be notably diminished if the liquid employed were more diluted. The three cases of Dr. Variot have proved the exactitude of my statement. He made use of a much larger amount of water, and his patients had to suffer no very great pain and no inflammation.] could do no harm, has made a trial of that method on three old men—one 54, another 56, and the third 68 years old. [The paper of Dr. Variot and my remarks upon it have appeared in the "Comptes Rendus de la Societe de Biologie," No. 26, 5 Juillet, 1889, pp. 451 and 454.] On each of them the effects have been found to be very nearly the same as those I have obtained on myself. Dr. Variot made use of the testicles of rabbits and guinea pigs.

These facts clearly show that it was not to a peculiar idiosyncrasy of mine that the effects I have pointed out were due. As regards the explanation of those effects by an auto-suggestion, it is hardly possible to accept it in the case of the patients treated by Dr. Variot. They had no idea of what was being done; they knew nothing of my experiments, and were only told that they were receiving fortifying injections. To find out if this qualification had anything to do with the effects produced, Dr. Variot, since the publication of his paper, has employed similar words of encouragement while making subcutaneous injections of pure water on two other patients, who obtained thereby no strengthening effect whatever. [Since writing the above I have received a letter from Dr. Variot announcing that, after injecting the liquid into these two individuals, he has obtained the same strengthening effects I have myself experienced.]

I believe that, after the results of Dr. Variot's trials, it is hardly possible to explain the effects I have observed on myself otherwise than by admitting that the liquid injected possesses the power of increasing the strength of many parts of the human organism. I need hardly say that those effects cannot have been due to structural changes, and that they resulted only from nutritive modifications, perhaps in a very great measure from purely dynamical influences exerted by some of the principles contained in the injected fluid.

I have at present no fact to mention which might serve to solve the question whether it would be possible or not to change structurally muscles, nerves, and the nervous centres by making during a good many months frequent injections of the fluid I have used. As I stated at the Paris Biological Society, I have always feared, and still fear, that the special nutritive actions which bring on certain changes in man and animals, from the primitive embryonal state till death by old age, are absolutely fatal and irreversible. But in the same way that we see muscles which have from disease undergone considerable structural alterations regain sometimes their normal organization, we may, I believe, see also some structural changes not essentially allied with old age, although accompanying it, disappear to such a degree as to allow tissues to recover the power they possessed at a much less advanced age.

Whatever may be thought of these speculations, the results which I have obtained by experiments on myself and those which have been observed by Dr. Variot on three old men show that this important subject should be further investigated experimentally. [It may be well to add that there are good reasons to think that subcutaneous injections of a fluid obtained by crushing ovaries just extracted from young or adult animals, and mixed with a certain amount of water, would act on old women in a manner analogous to that of the solution injected into old men.]

Reviews.

The Physician Himself, and Things that Concern His Reputation and Success. By D. W. Cathell, M. D., Baltimore, Md. The ninth edition, revised and enlarged. Published by F. A. Davis, No. 1231 Filbert street, Philadelphia, Pa. Price, $2.

This is a book of 291 pages, with large, clear type, well bound in cloth, with a fair index. It treats of all manner of things appertaining to the environment of the physician that can in any way contribute to his success, or make or guard his reputation; and it gives page after page of wise counsel to the physician himself, a tithe of which, if followed, would bring him immense profit in many ways. Take a few samples at random.

Page 1: "To fight the battles of life successfully it is as necessary for even the most skillful physician to possess a certain amount of professional tact and business sagacity, as it is for a ship to have a rudder."

Page 3: "By all means seek to locate in a community to which you are suited; that will be congenial as a place to live in, and in which you are likely to get business and be useful to your fellow-beings, and also to earn a living for yourself."

Page 7: "*A physician is judged by the company he keeps.* Avoid associating with aimless idlers and those who bear a merited stigma." "Let your associations be, as far as possible, with professional brethren and people of genuine worth."

Page 23: "It is perfectly fair and proper to seek reputation by all legitimate means, but avoid all intriguing and scheming to obtain practice."

Page 85: "You must not rely strongly on social influence for getting practice. Your very best friends may prefer that you test your skill and gain your experience on others, rather than on them or theirs."

Pagee 123: "A good rule, the only proper rule, is to visit your patient when, and only when, you think he really needs your care, whether once a day, or once in seven days."

Page 178: "Never write a prescription carelessly. Legibility is the first requirement, neatness the second," and so on to the end.

Besides a useful book, Dr. Cathell has written a very readable one, the style being so smooth and fascinating that its perusal is rather restful to the busy physician than tiresome. Every young man starting out in practice should purchase this book and carefully read it, though he may not subscribe to all the opinions of the author; while many older ones, well along in experience, would find therein much of value to somewhat smooth the remainder of their rough life's journey.

A Manual of Instruction for Giving Swedish Movement and Massage Treatment. By Prof. Hartvig Nissen, director of the Swedish Health Institute, Washington, D. C., with twenty-nine original wood engravings. F. A. Davis, publisher, 1231 Filbert St., Philadelphia, Pa. Price, $1.00.

According to the author's statement in the preface, this is the first manual in the English language that gives any information how to apply the Swedish movement and massage treatment in different diseases.

The first chapter gives a short history of the method; the second contains a classification of movements, with various preparatory suggestions; the third chapter gives a full description of the movements and positions, while the fourth applies the treatment to diseases. Under this head are given seven groups, as follows: Constitutional diseases, local diseases, diseases of the organs of circulation, respiration, digestion, urinary and sexual organs, and organs of movements. There is a complete index, so essential to every busy practitioner.

This little manual in the hands of any physician, and studied by him, will enable him to apply or direct the application of a method of cure of undoubted value in many cases.

PAMPHLETS RECEIVED.

Circulatory and Sensory Disorders of Neurasthenia. By J. H. McBride, M. D., Medical Superintendent Milwaukee Sanitarium for Nervous Diseases. Reprint from Alienist and Neuralogist, January, 1889.

Pelvic and Abdominal Drainage. By David Prince, M. D., Jacksonville, Ill. From the Transactions of the American Association of 1888.

Expression in the Treatment of Trachoma. By A. E. Prince, M. D., Jacksonville, Ill. Read at the meeting of the Illinois State Medical Society, 1889.

Suspension in the Treatment of Affections of the Spinal Cord. By Alexander B. Shaw, M. D., Professor of Diseases of the Mind and Nervous System and Electro-Therapeutics, Beaumont Medical College, etc. Read before the St. Louis Medical Society, June 15, 1889.

Report of a Case of Hystero-Epilepsy in a Man, and a Case of Hodgkins' Disease, Accompanied with a Possible Resulting Paraplegia. By Lewis H. Adler, Jr., M. D., Resident Physician University Hospital, Philadelphia. From the Medical News, 1889.

Also Report of Amputations Performed at the Hospital of the University of Pennsylvania from September 30, 1874, to December 31, 1888.

Also Report of a Case of Stricture of the Rectum, the Probable Result of a Specific Vaginitis. Both by Lewis H. Adler, Jr., M. D. From the Medical and Surgical Reporter, 1889.

University Interests in Cincinnati. By J. C. Culbertson, M. D. An address delivered before the Board of Trustees of the University of Cincinnati, February 14, 1889.

The Essential and Continued Fevers of Colorado. By B. P. Anderson, M. D. Read before the Colorado State Medical Society.

Clinical Observations on the Action of Sulfonal-Bayer. By several Authors. From W. H. Scheiffelin & Co., New York, 1889.

Semi-Annual Price List of Standard Pharmaceutical Preparations, etc., manufactured by Edward R. Squibbe, No. 36, Doughty St., Brooklyn, N.Y. Revised July 1, 1889.

Hand Book of Pharmacy and Therapeutics. Third edition revised. Eli Lily & Co., Indianapolis, Ind., 1889.

Sunnyside. A Sanitarium for the Treatment of Diseases of the Nervous System, Inebriety, and the Morphine Habit, under the management of Dr. Edward C. Mann, president New York Academy of Anthropology, etc. Brooklyn, 1889.

Abstract of Proceedings of the Michigan State Board of Health. Regular Meeting, April 9, 1889.

Proceedings of the Florida Medical Association of 1889. Jacksonville, Fla.

Monthly Bulletin, official publication of the Iowa State Board of Health. Edited by J. F. Kennedy, A. M. M. D., Secretary. Des Moines, June, 1889.

Twelfth Annual Report of the Board of Directors of the Omaha Public Library, year ending May 31, 1889.

Report of the Board of Managers of the Pennsylvania Hospital, May 6, 1889.

Quarterly Review of Narcotic Inebriety. Edited by I. A. Loveland, M. D. Gilsun, N. H., April, 1889.

UNSANITARY CONDITIONS IN COUNTRY HOMES. By Dr. Lucy M. Hall, Brooklyn, N. Y. Reprint from Journal of Social Science, December, 1888.

Second Annual Report of the Nebraska Eye and Ear Infirmary, Omaha, Neb.

The following Annual Catalogues and Announcements have been received:

Omaha Medical College.

Kansas City Medical College.

The Medical College of Indiana, Indianapolis.

The College of Physicians and Surgeons, Baltimore, Md.

The Jefferson Medical College, Philadelphia, Pa.

University Medical College, of Kansas City, Mo.

The College of Physicians and Surgeons, of Chicago.

The Medical Department of the University of Louisville, Ky.

Medical Department of the University of Denver, Colorado.

The Western Pennsylvania Medical College, Pittsburgh, Pa.

The Chicago Medical College, Medical Department of the Northwestern University.

College of Physicians and Surgeons, Medical Department Columbia College, New York.

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THE CENTURY DICTIONARY.

RECEIVED from Van Husen & Chapman, General Agents, for Iowa, Nebraska and South Dakota, Sioux City, Iowa, the prospectus of THE CENTURY DICTIONARY, an Encyclopedic Lexicon of the English Language, prepared under the supervision of William Dwight Whitney, Ph. D., LL. D., Professor of Comparative Philology and Sanskrit in Yale University. Published by The Century Company, New York.

The Century Dictionary is designed to be a complete general dictionary of the English language. It is to include all noteworthy words which have been in regular or occasional use at any time during the period in which English literature has existed—that is, from the beginning of the so-called middle English period, (about the year 1200) until the present time. It records both the literary and spoken languages, that is, all the important dialectal and colloquial words and forms which have existed in the speech of different sections of the English-speaking world. Lastly it is to include all foreign words and phrases which have become a familiar part of English speech, or are frequently in English books.

The work will comprise 6,500 quarto pages and contain 200,000 separate words, 300,000 technical idiomatic and colloquial phrases, over 300,000 separate definitions, 200,000 illustrative quotations from over 2,000 authors, and 5,000 to 6,000 pictorial illustrations.

This works presents the definitions of literary or non-technical terms with completeness and accuracy. The fund of old and provincial English and of local variations of speech in the United States thus secured for The Century will be found to be particularly valuable.

The extensive collection of illustrative quotations specially made for The Century Dictionary, have been used to illustrate the different meanings and idiomatic applications of both non-technical and technical words. They have been taken from all departments of literature.

It is a complete and authoritative technical dictionary, compiled by specialists in every department, containing information not to be found elsewhere.

The Century Dictionary will be published exclusively by subscription and in twenty-four parts, or sections, the whole consisting of about 6,500 pages, to be finally bound in six quarto volumes. The cost will be $2.50 a section. They will be delivered monthly, or four sections every four months, as desired by the subscriber. Subscriptions to the Dictionary are taken by agents, but since many persons may not wish to wait until an agent calls upon them, we will receive subscriptions sent directly to us, and will request the agent to supply the parts. If subscribers cannot promptly be reached in this way, we will send the parts directly from this office as they are issued.

[Purchasers will please mention THE CLINIC.]

INFECTION THROUGH THE UNBROKEN SKIN.—Dr. Schimmelbusch has endeavored to solve experimentally the question whether an infection with micro-organism can take place through the unbroken skin. Incited by the experiments of Garre and Bockhart, he rubbed pure cultures of the staphylococcus into the skin of a dying person. He produced in this way a crop of furuncles, and was able to prove by examination of pieces of skin excised after death, that the infection had taken place through the unbroken integument. Schimmelbusch also made a series of similar experiments with organisms found in the blood in various diseases, rubbing into the skin of rabbits the microbes of anthrax, septicæmmia, and chicken cholera. Of fourteen rabbits inoculated in this manner with anthrax bacilli, four died; and microscopic examination of the place of inunction in three of the animals disclosed no injury of the skin.—*Wiener Medizinische Presse, No. 46, 1888.* (*P. J. R.*)

proceedure with that object in view was not advisable. Treatment continued.

6 P. M., same day.—Tympanitis subsiding and every indication better.

29th—A. M.—Tumor was not so tense and tenderness much less. Temperature, 100; pulse, 88. Slight pain and tenderness in left iliac region over sigmoid flexure.

6 P. M.—Temperature, 99½; pulse, 75. Tumor disappearing rapidly. Very little tenderness now remains. Prescribed following to be taken a teaspoonful every two hours:

℞ Magnesii Sulph............................ʒi
Acid Sulph. Arom........................fʒij
Aquæ q s a d.,..................................℥iv
M.

Also recommend cautious injections of warm soap suds. The result of the above treatment was one quite copious stool at 1 a. m., 30th, and temperature normal. Discontinue opium and poultices.

31st.—Temperature and pulse normal. Tumor, which has been gradually disappearing since 28th, now all gone, except some thickening of tissues around cæcum. Has some abdominal pain. Use enemata and secure several discharges of hardened fæces.

February 1st.—Peristalsis annoying him. Gave hypodermatic injection of morphia and atropia. In the evening a natural stool is produced by injection.

Patient progresses nicely until 3rd. Was out of bed and dressed on 2nd. An enlargement now appeared just above pubes. Not tender to the touch. Gives semi-tympanitic note on percussion.

5th.—Tumor has enlarged considerably and presents all the physical appearances of a distended bladder. Tumor very easily felt per rectum, and fluctuation easily made out. Notwithstanding, patient voids urine normally. We introduce a No. 5 catheter, but get no urine. Had just voided his urine.

6th.—Dr. Bullard, of Seneca, Kas., Dr. Wright and myself made a very careful examination, and determined that the tumor was an adventitious cavity filled with fluid, and that exploration was the only means of determining the character of its contents, but as the tumor seemed softer and there were no urgent symptoms, the operation was postponed for the time. Saw patient once or twice a day until the 10th. The tumor had kept gradually enlarging until now it reached from pubes to one inch above the umbilicus. During this time the temperature and pulse varied very little from normal. The patient could now retain nothing in the stomach, and alimentation and stimulation were kept up per rectum. Urine voided frequently on account of pressure.

The appearance of the abdomen was very much like that presented in the sixth month of utero-gestation. It was very tense and gave as before a semi-tympanitic note on percussion, except when deep pressure was made, or the superincumbent gas was displaced by change of position, the note was dull. Administered subcutaneously a drachm of dilute alcohol, also one-fourth grain of morphia, and after the expiration of twenty minutes, with the patient in the recumbent posture, introduced the needle of the aspirator two inches below the umbilicus, and after the escape of a quantity of very offensive gas, drew off twelve ounces of sero-purulent fluid. Nausea ceased. No pain and patient was taking medicine and nourishment *pro ren.* Solicited a movement from bowels on morning of 12th. Passes urine very freely since operation.

On 13th again introduced needle of aspirator just below former puncture and drew off eighteen ounces of gas and twenty-four ounces of same character of pus as before—all we could get. The patient being very near syncope, we did not inject cavity. Strapped abdomen with adhesive plasters, enjoined perfect quietude and kept patient slightly under influence of opium for twenty-four hours.

14th.—Patient doing well, except complains of soreness and pain in left parotid gland, for which local treatment is prescribed. Abdomen flat and no tumor present. Parotid inflammation progressed rapidly and on the 16th made horizontal incision one and one-fourth inches deep, three-quarters of an inch anterior to the lobule of the ear. No discharge of pus from incision until 18th, when it became quite profuse.

Abdomen now, 18th, enlarging. Will aspirate again to-morrow.

19th.—A. m., drew off as before twenty-four ounces pus and injected ten ounces of a two per cent. solution of carbolic acid and withdrew it. A severe peristalsis came on while needle was deeply inserted and moved the point until some blood escaped. P. m., temperature 102°. Gave few doses tinct. veratrum until temperature fell.

20th.—Pus discharging from external meatus auditorius of affected side.

21st.—Temperature normal. Sits propped up in bed. Appetite immense. Diet principally liquid. Discontinue quinine and give tonic of gentian, hydrastis and taraxacum.

22nd.—Make second incision below angle of jaw, but no pus till next day.

23nd.—Fluid collecting in cavity again, which it continues to do till the 27th, when the aspirator was again brought into service and twenty-three ounces of chocolate colored liquid withdrawn and cavity cleansed with carbolized solution as before. Color of withdrawn fluid due to escape of blood in cavity at previous operation. Pulse has become very frequent, 110 to 130 per minute. Patient is gaining flesh and feels quite comfortable until cavity gets full. Parotid now discharging very profusely.

On March 5th, it was necessary to evacuate again, which we did, and drew off twenty-four ounces of pus, more nearly healthy. Patient has experienced considerable pain from pressure in past twenty-four hours. After each evacuation of the contents of the sack, the patient passed a large quantity of limpid urine.

On the 11th, the sack having refilled again, we concluded to make an incision and put in drainage tube, but after making a close examination and finding the cavity so much smaller, we decided to aspirate once more, which we did, and drew off ten ounces of very thick, healthy looking pus. Irrigated cavity, as before. Parotid has ceased to discharge.

16th—Cavity refilling; patient becomes restless and has headache and nausea. Temperature 101; pulse 140. Tumor very tense; extends from pubes to one inch below the umbilicus. Decided that free drainage is indispensable. An incision is made on linea alba, midway between pubes and umbilicus, and after the escape of eight ounces of pus, inserted drainage tube and washed out cavity with 10 per cent. solution of listerine. The drainage tube (rubber) was left *insitu* for one week, and the cavity thoroughly cleansed with a 1 in 2,000 solution of bichloride of mercury, a 10 per cent. solution of listerine or a 2 per cent. solution of carbolic acid. The last time the cavity was injected it had a capacity of not more than one and a half ounces. A day or two previous to the removal of the tube I made an exploration with an ordinary silver probe, which I could introduce its entire length in the direction of the left sacro iliac synchondrosis. After the withdrawal of the drainage tube, the external wound, which was no larger than was necessary to insert the drainage tube, healed readily, and the boy is now enjoying good health, laboring as an ordinary farm hand.

On Saturday evening last I examined him, and found no evidence that the disease had ever existed, except the cixatrix on the abdomen where the incision was made. This case was peculiar on account of the location of the pus sack, as it appeared in the median line and in the hypogastric region. This gives rise to the following queries: Was there a primary pus cavity in the cæcal region which was ruptured, and the hypogastric tumor consequent on the escape of the pus from its original cavity? Did the cæcal tumor, which was all gone when the hypogastric tumor became apparent, disappear by absorption, and the irritation or inflammation in the region of the symoid flexure become the starting point for the pus formation, or in either case was the pus cavity sub-peritoneal? If so, was it beneath the posterior or anterior parietal layer? The direction in which the probe passed, i. e., toward the left iliac synchondrosis, would indicate the former. This, gentlemen, was to me a very interesting case, and a reference to my case book will show by the many midnight visits I made that it deprived me of no small amount of sleep. This was my first case of that nature, and I was somewhat timid. It will be observed that I should have made an exploration at an earlier period.

SINGULAR CASE OF CONCUSSION FROM EXPLOSION OF GIANT POWDER.

By A. B. SOMERS, M. D., Omaha.

Charles Johnson, a Swede, in the employ of the American Water Works Company, at Florence, Neb., while engaged in breaking up frozen earth February 25, 1889, with giant powder, put a half-pound stick of the powder that had got wet and was frozen, near a fire built on the ground, to thaw.

While standing about two feet distant, with his left side nearest the fire, the powder exploded. I saw him about one hour later. There were no powder marks upon his person, but his left leg was covered with ecchymoses from the top of his shoe to his knee, on the outer and anterior portions, some spots being almost black, and in several places the injury was so severe that the skin sloughed.

A portion of his left wrist, between his sleeve and mitten, being bare, was completely covered with drops of blood, exuding through the skin from broken capillaries. There was rupture of the left membrana tympani, with hemorrhage from the internal ear and total deafness on that side. Left eye uninjured. Pupil of right eye contracted; could distinguish light with this eye, but could not count fingers. The entire face, neck (in front and to the left) and right eye covered with ecchymosed spots and drops of blood from ruptured capillaries. There was also nose bleed and expectoration of blood from the throat and air passages. Considerable mental confusion.

February 26.—Expectoration of blood stopped. Vision of right eye much improved. From this time all the symptoms improved rapidly, except the deafness of left ear, which lasted for several weeks, but finally got well, or nearly so.

BEST TREATMENT OF EPITHELIOMA.

By W. O. HENRY, M. D., Pawnee City.

The title of my paper may appear to you rather odd, in view of the fact that epithelioma has so long been treated almost exclusively in the regular school by the knife, but I wish to call attention to some facts which may be of interest, and I trust they will be helpful to us as members of this honorable and humane profession.

In view of our high calling and the responsible position we hold, we should be cautious in adopting any methods or plans of treatment not endorsed by the rank and file of the profession; but on the other hand it is important not to ignore plans and methods which are really useful, merely because they have not come to us in the orthodox way, or even if they have been put forward by some irregular school or person. I think we should be eclectic in the true sense, always on the alert to get new ideas or beneficial treatment for our patients wherever we can do so. I have, therefore, to report a case of epithelioma successfully treated by the use of caustic application.

June 18, 1888, G. E——, aged about 50, came to me with an ugly looking ulcer upon the neck, just below the right ear and behind the angle of the lower jaw. He stated that, in February preceding, a very small sore covered with a thin and translucent scab had shown itself where the ulcer now existed. It gave him no pain, but being unsightly, he one day called attention of his physician to it, who gave him a salve for it, to be used freely. After a few applications the scab dropped off, leaving a small ulcer exposed to view. The family physician took the case in charge and managed it until the case came to me at the above time. As the ulcer continued to enlarge the doctor advised the patient to visit Chicago and get the opinion of a surgeon there as to the nature of the case and the best method of treatment. Instead, however, the patient came to me, and I found the following condition. There was an ulcer, located as above mentioned, about 1¼ by ⅞ inches in diameter, ¼ inch deep, with raised border and hard base. It was inclined to bleed easily and there was considerable induration of the edges and surrounding tissues near by, but especially extending upward toward the lobe of the ear. There was also an extensive eczematous eruption of recent origin extending over the side of the neck and breast to the median line in front and the mammary gland below.

The general condition of the patient had been good until this eczema had shown itself, since which time he had been very much worried and annoyed, so that his general condition had not been so good. I gave him the following perscriptions: Iodide of potassium and Fowler's solution in syrup three times a day after meals. To the ulcer, which I thought to be cancerous, I applied three times a day an ointment of sul. zinc, sul. morphia, carbolic acid and vaseline. To the eczematous skin I applied four time a day an ointment of sul. zinc, calomel and vaseline.

June 30—The eczema had practically disappeared, and the patient was feeling first rate. The ulcer looked badly and I cauterized it with lunar caustic and continued previous treatment.

July 3 and 7—Cauterized again, continuing treatment as before.

July 9—There is some improvement in the condition of the ulcer, but it is not progressing fast enough. Hence I had prepared and used the following paste as recommended by Dr. Marsden, of London:

℞. Arsenious acid..........................ʒij
Mucilage acacia..........................ʒj
Mix with q. s. water to make a thick paste.

I cleansed the ulcer carefully with absorbent cotton and then applied the paste freely to the bottom, sides and edges of the ulcer. I then pressed a piece of lint into it to absorb the surplus paste, and after allowing it to dry I removed with the scissors the extra lint. During the application and for a little time afterwards there was some burning pain. I I made the application at 11:30 A. M. and he called at 2:30 P. M., when he was feeling all right and no pain. I now gave him internally ½ dram of Syr. Iodide Iron, three times a day.

July 10th, 8 A. M. patient reports that he did not sleep any during the night, as there was an intense burning and throbbing pain about the ulcer. Feels some easier this morning. There is swelling and some inflammation around the ulcer. The lint is now firmly adherent and hard over the ulcer.

July 11th, considerable swelling and inflammation. Ordered bread and water poultice constantly applied.

July 13th, still some inflammation but it is subsiding. A line of demarkation is appearing between the diseased and healthy tissues. Ordered poultices continued.

July 17th, patient doing well. Line of separation is now well marked.

July 20th, patient is feeling first-rate. I removed the piece of lint and scraped away considerable dead tissue. Directed the poultice to be continued.

July 24th—Slough has fallen away from the upper part of the ulcer and leaves a nice healthy base. Continued poultices, and ordered the ulcer washed once a day with weak bichloride solution.

July 31st—Left off poultices and applied black wash constantly upon absorbent cotton.

Aug. 7th—Ulcer filling up very fast, and granulations all look healthy. Continued black wash.

Aug. 13th—Ulcer has practically healed up, having filled up to the skin level. Patient is very much pleased with the treatment, and especially with the result.

Now, while the treatment lasted about one month yet it was eminently successful, and for a certain class of patients, is the treatment.

While of course the free use of the knife would have removed the diseased tissue much quicker, it certainly could not have done it more nicely. There are persons so bitterly opposed to the knife that they will go almost any distance to get the use of caustics rather than submit to any cutting operation. As surgeons, then, we ought to be familiar with the use of the best caustics, that we may give to our patients the intelligent benefit of them rather than let them go off to be abused, and even improperly treated, by impostor cancer doctors.

I have thus given you rather a minute description of the remedy and its management, that those of you who care to be equipped with the very best caustic for use in such cases may be able to prepare and use this remedy when needed. By way of caution, let me say that this paste should never be used over a larger surface at once than one square inch. When a larger surface than this is diseased, first treat one part and then another, but only one square inch at a time.

The proper treatment then for epithelioma is removal; first, by the knife in suitable cases where it will be submitted to, and second, by arsenious acid paste where a caustic will answer or is demanded.

*OBSERVATIONS ON SOME MODERN SURGICAL PROCEDURES.

By J. E. Summers, Jr., M. D.

I beg the forgiveness of the Society for the failure in my duty as chairman of this section in not making the customary report on progress. The time allowed for rendering such a report is too brief to do the subject justice, so I will only consider two or three of the more important modern surgical procedures.

A question which to-day is attracting great attention, and is certainly of a much moment as any in the field of medicine, is that of the best method to follow in the *operative* treatment of acute intestinal obstruction.

Starting out with the proposition that any cause producing acute intestinal obstruction not amenable to the ordinary recognized methods of treatment, viz: Massage, posture, injections, opium, etc., demands abdominal section.

To narrow down the particular point to which I intend to confine myself, obstructions such as by bands removable by division; enteroliths and foreign bodies by incision and subsequent suture of the gut; intussceptions which can be relieved; reducible internal hernia —in fine, only lesions requiring either an artificial anus above the seat of obstruction, resection of the occluded portion, or an anastomosis of those portions of the gut above and below the seat of obstruction, can within the limit of this part of my paper be considered.

The formation of an artificial anus is only good practice when made to prolong life and save suffering in cases of malignant disease in the lower part of the intestinal tract, which suddenly change symptoms of chronic for those of acute obstruction; or an artificial anus may be made in cases of obstruction from other causes, the condition of the patient and a high grade of intestinal distention above the seat of obstruction admitting of no extended procedure or search of the cause and seat of obstruction at the time of operation; or where at the abdominal section the seat of obstruction cannot be found—the rule to follow is to open that part of the distended gut which the condition of the patient and anatomical and operative knowledge will bring you nearest the proximal point of the seat of obstruction. The mechanical part of this operation I will not discuss. The varieties are found in works devoted to operative surgery.

The formation of an artificial anus is merely palliative, although a few recorded cases prove that after its performance nature has re-established the natural passage of the fæces.

When, for gangrene, tumor, volvulus or stricture, removal of a portion of the gut is demanded, or in the judgment of the surgeon the best practice, the question of how to do this most rapidly and safely must be decided. In an exhaustive paper by Dr. B. F. Curtis, in the May, 1888, number of the Annals of Surgery, it is clearly shown from an analysis of a large number of cases operated upon with modern antiseptic precautions, that:

> "One of the principal causes of the high death rate is the delay which takes place in putting the patient in charge of the surgeon. This delay is not to be measured merely by the lapse of time, but by the failure of the patients' strength, and the failure depends upon the severity of the symptoms quite as much as upon their duration."

Curtis showed that although the operation may be done early, when the patient is in fairly good condition, yet in 45 such cases:

> "Thirteen died of shock; in 3 cases the unusual length of the operation may be assumed to have been the cause of death, and in 17 cases sepsis probably due to the operation was the cause of death. In 12 cases the cause could not be definitely ascertained, but as the majority died within twenty-four hours after the operation it was probably shock and exhaustion."

I cannot occupy the time required for a study of statistical tables. Any surgeon whose experience has brought him in contact with many of the diseases and injuries within the abdomen, amenable to operation, knows that his success in dealing with such cases has been in proportion as he has been able to operate early, rapidly and with cleanliness. This is especially true of intestinal obstruction.

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*Report on Progress in Surgery.

The usual method, circular enterorrhaphy, *i. e.*, suture of the divided ends of the gut and mesentery by the Lembert suture, or one of its modifications, is the only operation after resection, whereby the function of the intestinal tract has been restored in the human subject. I must except an operation I saw Billroth perform successfully some six years ago, where he, after resecting a pylorus, closed the divided ends of stomach and duodenum and then performed a Wolfler operation, a gastro-enterostomy, joining an incision in the greater curvature of the stomach to a similar one in the upper part of the jejunum by the Czerney-Lembert suture.

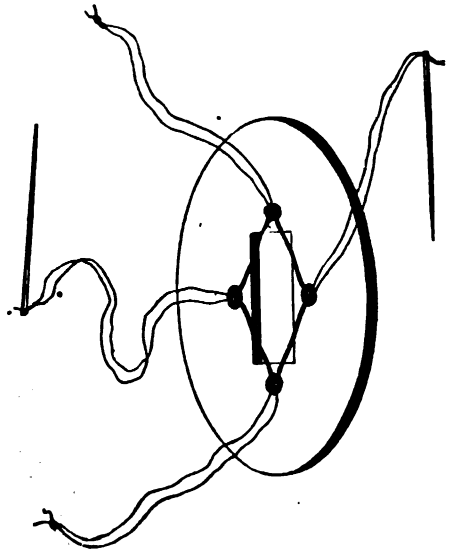

FIG. I.—Senn's Decalcified Bone Plate (Abbe).

Senn has successfully performed on animals an operation in which he fastens to the edge of the divided gut, by a continuous cat-gut suture, a rubber ring which has been slipped into the gut (the ring is made from a soft, pliable rubber band by fastening the ends together with two cat-gut sutures). The principle of the operation is the same as Joberts', *i. e.*, an invagination, so the rubber ring must be the length of the intussusception ⅓-½ inch. As it is the lower margin of the ring, which is stitched, this prevents the bulging of the mucous membrane.

"The ends of the bowel are now brought in contact and fastened together with four cat-gut sutures, which are placed equidistant from each other. Invagination is now made by gently pushing the ends of the bowel in opposite directions, being careful to push the ring sufficiently deep so that its upper margin is grasped by the neck of the intussuscipiens. A few superficial sutures are applied simply for the purpose of preventing disinvagination."

Senn claims this operation can be done in ten minutes, provided everything essential is at hand. This may be so on dogs, but in the human subject more time and care is demanded by the condition and lesion calling for an operation. He still further recommends surrounding the line of junction with a flap of omentum as an additional safeguard.

Senn extended our knowledge by bringing before the profession, apparently the most important of all proceedings in operative treatment of acute intestinal obstruction, and which is applicable to all varieties and positions of this lesion, except in the lower part of the sigmoid-flexure and rectum.

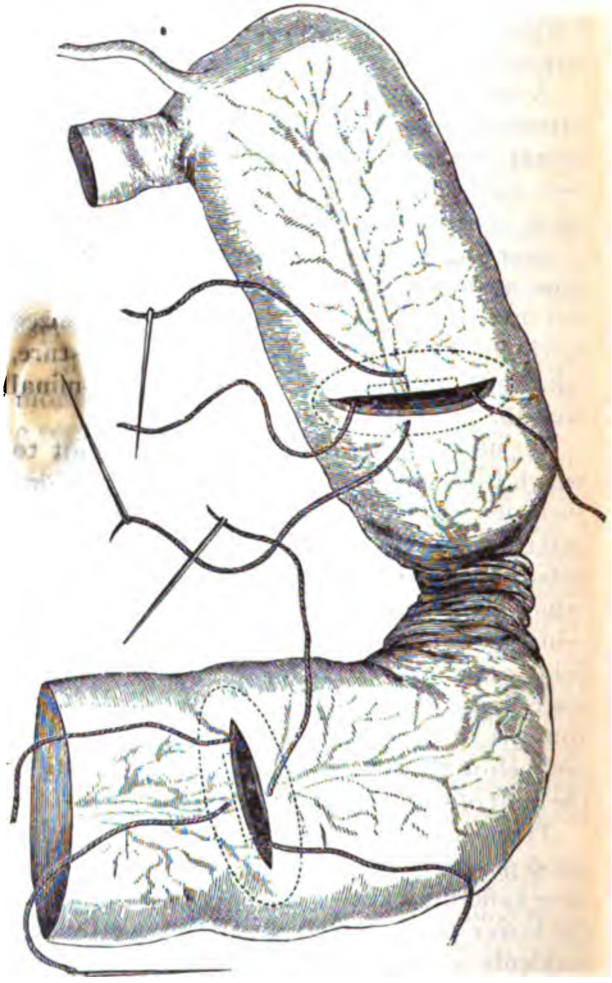

FIG II.—Senn's Plates Inserted (Abbe).

The operation is in principle an enterotomy where the suture of the gut, always a tedious and difficult operation, is replaced by what Senn calls an intestinal anastomosis. Those portions of the bowel nearest above and below the seat of obstruction whose surfaces can be approximated are drawn forward into the abdominal incision and secured by an assistant; or a piece of antiseptic gauze is passed through the mesentery on the proximal and distal sides of the obstruction and tightened sufficiently around the gut to occlude its lumen, thus shutting off the field of operation from the remainder of the alimentary canal.

> "The bowel on the proximal side is incised on the convex surface to the extent of an inch and one-half * * * and the bowel on the distal side incised in a similar manner. Into each of these incisions a decalcified, perforated bone plate is inserted, and with the lateral sutures armed with a round needle the margin of the wound is transfixed. After the plates and satures are in place, the loops are thoroughly disinfected and the serous surface to the extent of the size of the plates are lightly scarified with the point of a needle, when the wounds are placed *vis-a-vis* and the corresponding four threads tied together with sufficient firmness to secure perfect coaptation of the serous surfaces. The sutures are cut short and their ends buried as deeply as possible by pushing them in between the approximated bowels with a director or blunt scissors. A few superficial stitches of a continued suture will enhance the safety of the operation. In this manner an anastomosis is established with the exclusion of probably only a small portion of the intestinal tract. The temporary ligatures above and below the obstruction are removed, the gut carefully washed and returned into the abdominal cavity."

This method is applicable after a resection of the gut for gangrene, injury or a new growth. The divided ends of the gut are closed by a continuous suture and an anastomosis established. Abbe recommends that in doing this the sutured ends should be placed so as to be directed in opposite directions, thus retaining the natural peristaltic force.

There are at present drawbacks to the use of the decalcified bone plates, and then they have their faults. I will illustrate the former: A lady had been admitted into the Clarkson hospital suffering with chronic intestinal obstruction, and deeming a laparotomy proper, I telegraphed to Milwaukee for some bone plates in order to be prepared to give my patient the advantage of their use if indicated. After waiting five days, and no plates having arrived, I operated. It was not until three days later that the plates reached Omaha. Therefore, as the plates are not to be had away from the large supply depots, and are kept on hand by few surgeons, they will not be used generally in the surgery of acute intestinal lesions.

The faults of the plates are the small size of the openings, and their limited elasticity. Abbe, of New York, has overcome, I think, all the drawbacks and defects of the decalcified bone plates. He recommends cat-gut rings, which can be made in a few minutes by any surgeon; they are very elastic, and the size of the openings is of course greater than in the plates. "They are made of the heaviest cat-gut, softened in hot water until it ceases to twist upon itself. It is then formed in a ring of four strands on the ends of three fingers, and wound over and over with the same sized gut tightly applied. When completed, it is, as you see, stiff and flat, with no disposition to curl. The threads are quickly and simply adjusted around the ring and insure its making a firm pressure until it has dissolved in the bowel. The ring, if made to encircle the ends of four fingers will be competent to establish a large opening in the

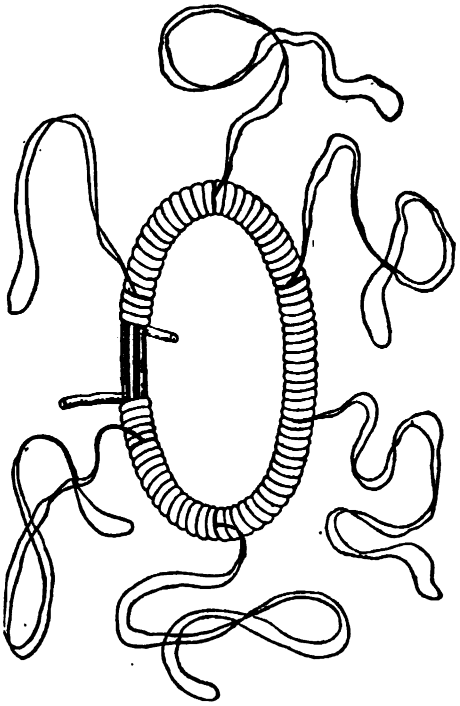

FIG. III.—Cat-gut Ring.

colon." Fine cat-gut is better than silk for the threads, because on account of its swelling there is less danger of leakage and infection.

I take great pleasure in exhibiting to you some of Senn's decalcified bone plates as well as the cat-gut rings of Abbe, in order that you may more clearly understand their use, and I wish also to have you examine this beautiful specimen, which was removed from a coach dog killed nine days after a successful operation by myself, in which an artificial acute intestinal obstruction was first made, and then an anastomosis of the gut above and below established by means of the Abbe rings, which you can still see partially attached within the gut at one border of the artificial communication. The rings are much softened and partially disintegrated.

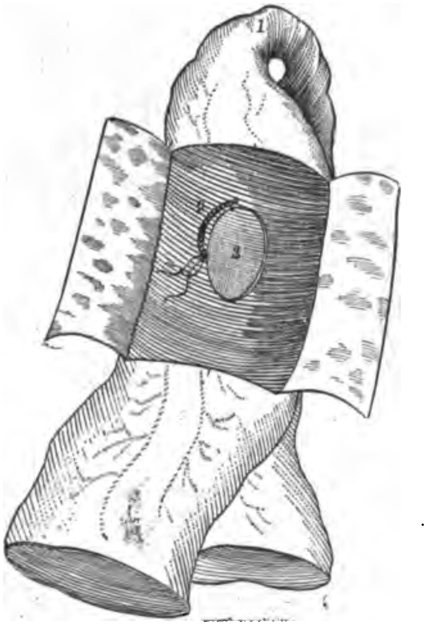

Fig. IV.—Anastomosis of dog's gut.

1. Acute obstruction. 2. Disintegrated cat-gut rings. 8. Communication between loops.

Senn has operated on the human subject four times and Abbe twice. From my own trials on dogs I am convinced that the cat-cut rings are of superior value to the decalcified bone plate.

HERNIA.

At our last meeting at Lincoln, I advocated an operation for the radical cure of inguinal hernia known as McBurney's, believing this operation to be in principle a better one than the operations of Banks, Macewen or Czerney, or their modifications. During the past year the chief admirers of these operations, and especially that of Macewen in New York, have quite abandoned them and are now proclaiming themselves strongly in favor of the McBurney operation. This was evinced in a discussion following the reading of a paper on this subject by McBurney before the New York Academy of Medicine, February 21st of this year.

The paper was published in the *Medical Record* of March 23rd and a number of excellent cuts given, several of which I have had copied in order to show the steps of the operation which I consider so important a procedure, and I am fortunate to be able to show you a man upon whom I did this operation in the Clarkson Memorial Hospital, Omaha, on April 6th, who is on his way to his home in Butte City, Montana. (This man had been twice operated upon by another surgeon by the Heaton, or injection method, with only temporary benefit.)

The objects to be sought in order to bring about a radical cure of a hernia are:

First. The complete removal of the sac, that is, the restoration to the peritoneal surface of the abdomen, at the point where the hernia begins of the same smooth, tense condition that exists at other parts of the inner lining of the abdominal walls, "and thus remove the predisposing cause to a return, i. e. peritoneal laxity at the internal ring."

Second. Having done this, means must be taken to give the peritoneum the most unresisting support.

Only two methods other than McBurney's can possibly produce a complete obliteration of the *interior* of the sac. One, Ball's aims to do this by seizing the sac high up in the ring and twisting it as one might an artery. There is danger in this of possibly twisting an adherent piece of omentum or gut, and then, in cases of congenital hernia or where we have to deal with a diseased or injured sac, the operation is unfeasible or illy suited.

Macewen, as you remember, dissects out the sac, loosening the peritoneum around about the internal ring; then he passes a suture lengthwise through the sac, bringing the needle through the abdominal wall above the internal ring. The skin of the abdomen is drawn upwards so that the needle emerges within the area exposed by the upper end of the incision. This throws the sac into folds and it is drawn up within the abdomen, forming a kind of cone with its base downward, "surrounding the circumference of the internal ring." The sac is obliterated but there is left no smooth surface of peritoneum.

This method cannot obviously be employed in the same class of cases where Ball's is inapplicable. In order to treat the peritoneum as desired, McBurney exposes the internal ring by dividing the anterior wall of the canal. The sac is carefully dissected out and opened, contents returned into abdomen; then with a finger passed into the sac to the internal ring to prevent inclusion of intestine or omentum, an assistant passes a stout cat-gut ligature around the sac, which is drawn upward by forceps, and ties it tightly just over the tip of the finger; the sac is cut away, leaving pedicle enough to prevent slipping off of the ligature. In the cases inapplicable to the other two operations, Ball's and Macewen's, the sac can be cut away and its neck sewed with cat-gut.

The second indication, support, is met by sewing all the tissues of the periphery of the wound except the lower scrotal part together with interrupted sutures. A kind of button-hole is formed; after the edges of the scrotal part of the incision have been sutured together, this button-hole is packed with iodoform gauze and allowed to heal by granulation, a firm broad cicatrix resulting. The drawback to this method of repair is the time consumed, the patient being required to remain in bed six weeks. Other methods of closing the incision after hernia operations fail in two ways: The upper part of the canal remains as before the operation, thus inviting a return of the hernia, or in attempts to obliterate by suture, too weak a union results to afford sufficient resistance to a return of the hernia. Even tying off, twisting or folding the sac after dividing the ring would not offer so good a prospect of cure if the raw surfaces were immediately brought in direct contact, but would certainly be a better practice than any of the other methods of suturing I am acquainted with.

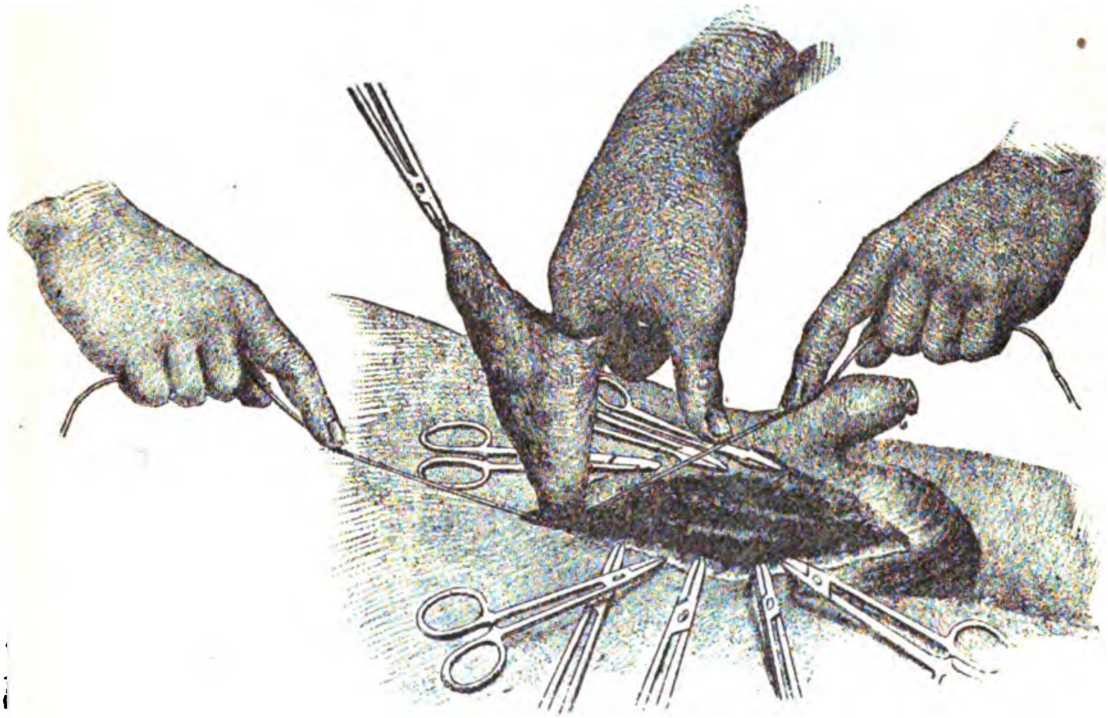

FIG V.—Ligitation of neck of sac.

In the case I show you the sac was cut too short, and the ligature slipped off, necessitating the seizure of the periphery of the divided sac by a number of clamp forceps, and considerable trouble was experienced before the ligature could be reapplied.

GUN-SHOT WOUNDS OF THE LIVER.

We learn most from our failures, and a thought suggested by one of my own, leads me to call attention to a method of controlling hemorrhage in cases of gun-shot wounds of the liver, where the wound of exit from the liver is so high up on the under surface that neither sutures nor gauze tampons are practicable. My suggestion (the mechanical part of which I have demonstrated satisfactorily to myself), is to expose the wound of entrance either by a laparotomy or resection of the ribs. In either case the abdominal cavity should be opened so as to allow of thorough exploration. Through the wound of entrance a bougie, or bougie-a-boule, should be passed along the track of the bullet until its end emerges at the point of exit, when either a suitable rubber tube or strip of antiseptic gauze should be attached to the exploring instrument, which should then be withdrawn so as to bring the tube or gauze within the whole track of the wound. A tamponing of the wound would then be made to control, at least, fatal hemorrhage. This may seem the fancy of an idealist. It is not, so far as the operative procedure on the cadaver is concerned. In the fatal case of hemorrhage from the liver to which I have referred, and which I reported, together with a number of other abdominal sections in the *Pittsburg Medical Review*, although the section was done for a supposed wound of the intestine, I cannot but believe that had the above suggestion been carried out the fatal hemorrhage, which I was able to control only temporarily by iodoform gauze packed in between the liver and meso-colon and brought out at the lower angle of the transverse incision, would not have occurred.

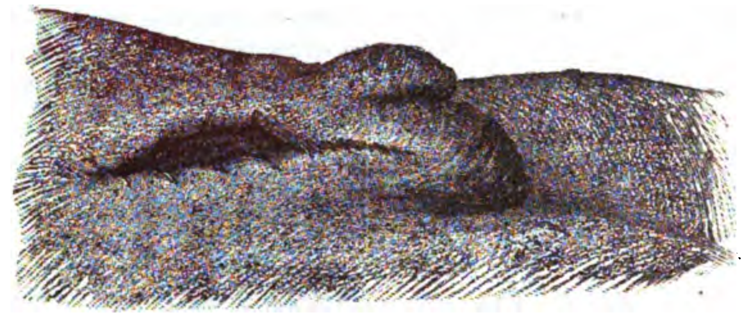
FIG. VI.—Button-hole Appearance after Completion of Operation.

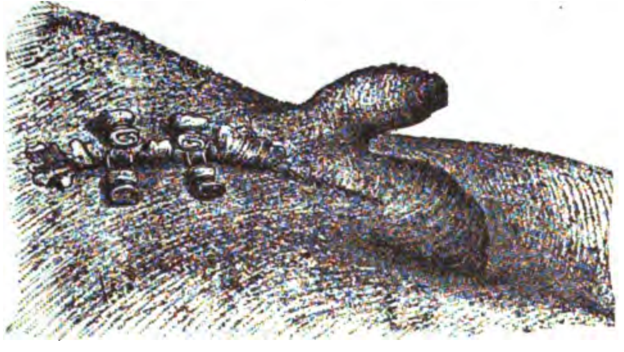
FIG. VII.—Wound Packed with Iodoform Gauge and Edges Approximated.

ALEXANDER'S OPERATION.

Inasmuch as the inguinal canal is the property of the general surgeon, as well as of the gynecologist, I will not be going outside of the sphere of the section on surgery in calling attention to a new method of shortening the round ligaments, for anterior, posterior or downward displacements of the uterus, and also for prolapsus of the ovaries.

Instead of exposing the external ring by a free incision as first advised by Alexander, and then separating, shortening and fastening the ligament, now a short incision is made one inch in length, opening the canal one-half inch above the border of the external ring by dividing the inter-columnar fascia. The incision is carried down to the tendon of the external oblique muscle—the external ring is recognized by the finger, and then an incision one-fourth to one-third of an inch is made through the inter-columnar fascia. One strabismus hook is made to draw the outer side of the wound in the fascia outwards, while with another the round ligament enclosed in its fascia is hooked up.

At the last meeting of the American Medical Association, Kellogg explained the minute details of the procedure as follows:

> "Passing the hook down on the outside of the gray-

ish mass which is seen through the opening in the fascia, press this mass a little toward the center of the body and push the hook down to the lower part of the canal, half or three-quarters of an inch below the level of the tendon of the external oblique. Turning the point of the hook inward, a mass of tissue is easily secured and brought out through the opening in the fascia, which will usually be recognized at once by its grayish color and the great number of anastamosing blood vessels as the structure containing the ligament. It is of great importance that the wound should be wholly free from blood, and the dissection a clean one, as by this means only will the natural color and appearance of the structures of the ligaments be so preserved as to enable one to recognize them. The structures hooked up usually consist of the ligament surrounded by a sheath of fascia, with its accompanying nerve and blood vessels. To make sure that the ligament shall not escape back into the canal, from which it is not always easy to recover it, slip a thick carbolized silk thread underneath the whole mass by means of an aneurism needle. The ends are tied together or secured by a pair of snap forceps. The next step in the operation is to carefully enucleate the ligament from the membrane surrounding it, which is easily done by the aid of a strabismus hook. On making a longitudinal slit in the fascia, the smooth, glistening surface of the round ligament is usually readily discovered, and the process of enucleation may be completed in a few minutes. In exceptional cases, the ligament, even at this point, proves to be a mere tendinous thread. On this account great care should be taken not to sacrifice any chance for securing the ligament by cutting or breaking off any of the fibres which dip down into the canal toward the internal canal. By repeated trials, even in the most unpromising cases, a fibre will at last be found which, when pulled upon, does not drag upon the borders of the ring to which the fascia surrounding the ligament is attached. Drawing this outward, the operator will be gratified by seeing a smooth, glistening cord emerging from the wound in the direction of the internal ring. Carefully seizing this with the thumb and finger, a little steady traction will bring the ligament fully into view. The ligament may now be dropped into the wound, being still secured by the loop of silk. Place in and over the wound a mass of absorbent cotton, saturated with four thousand solution of mercuric bichloride. After securing the ligament upon the opposite side in the same manner, both the ligaments should be drawn out to the extent of three to five inches. The pouch of the peritoneum which forms the canal of Nuck will be seen gradually separating from the ligament as it is steadily pulled forward.

" The next procedure is the placing of the silver wires, which should be passed through the tendon of the external oblique crossing the inguinal canal, and including at least one-half the thickness of the round ligament. Special care should be taken to include in the silver sutures the pouch of peritoneum investing the ligament. Two silver sutures are sufficient. The slit in the inter-columnar fascia is now closed by two or three carbolized silk sutures. At least two of these are also made to include the ligament. Before tying the last suture, the outer portion of the ligament is tucked into the outer end of the inguinal canal. If the ligament has been greatly bruised, however, or if the vessels have been tied, so that its nutrition has been cut off, the ligament should be brought out through the lower angle of the wound. This is very rarely necessary, if the operator is skillful. The deep and superficial fascia are now carefully brought together by a continuous suture of small chromicized catgut. The skin is united in a similar manner, the silver sutures twisted, and the operation is completed. The uterus is supported in position by a lever pessary, which is fitted before the operation. If necessary, this is held up by the hand of an assistant, during the securing of the ligaments by sutures. In cases of retroflexion, the fundus must be held forward by means of a sound, and afterwards kept in place by a stem pessary, unless the flexion is a rigid one, in which case rapid dilitation should be performed upon the ligaments and a stem pessary placed in position."

This operation is said to be quite painless under cocoaine anæsthesia; not more than five to seven grains being required. Hot vaginal injections are used two or three times a day; the bowels after two or three days are kept lax by suitable means. The silver sutures are removed on the seventh or eighth day. The patient is kept in bed for three or four weeks. The operation of shortening the round ligaments has its place for the relief of the lesions above noted, yet it will fail of its object unless auxiliary recognized methods of treatment go hand in hand. Personal, although limited, experience in this operation makes me think highly of it.

PHELPS' OPERATION.

Certainly there is no deformity which causes the practitioner more annoyance than that of club-foot, and especially the variety known as varus or equino-varus. It is to the treatment of these forms of club-foot to which I wish to direct attention—to an operation devised by Phelps, of New York.

The principle involved is the free division of all restraining tissues by an open aseptic incision; the resulting gap being allowed to heal under Schede's method (organization of the moist blood clot.) This form of repair I discussed in a paper published in the Transactions of this Society in 1886.

The operation is thus performed: After a sub-cutaneous tenotomy of the tendo Achilles, an incision is made commencing immediately in front of the tip of the inner malleolus, extending downward one or two inches. This incision divides all the soft parts down to the bones. From within this incision are divided the tendons of the tibialis anticus, tibialis posticus, flexor longus digitorum, flexor longus pollicis, the bellies of the flexor brevis digitorum and abductor pollicis, the plantar fascia, the long plantar and deltoid ligaments, nerves and blood vessels. If the plantar artery is divided, its ends should be secured before the application of the dressings, which would otherwise soon become soaked. after the removal of the Esmarch's tourniquet—this must be applied before commencing the operation. After the application of the antiseptic dressings, the foot is held in the corrected position (exaggerated), and a plaster bandage applied. In from two to three weeks the plaster and dressings are removed and then re-applied to remain two to four weeks longer, when on removal the wound will be found entirely healed. All that is then essential is a strong, stiff-backed laced shoe, or perhaps some form of brace to be worn until the parts have gained sufficient tone to be left to themselves. I have operated a number of times according to this method, and find it superior to all others; curing cases which seemed to demand the removal of a wedge of bone in order to bring the foot into the correct position.

BRAIN SURGERY.

Before closing my report, I cannot refrain from reminding you of the brilliant work being done in brain surgery. We owe most of our knowledge to Horsley and Macewen abroad, and to Weir and Keene at home—I mean as operators for the removal of growths within the cranial cavity. Others have done successful work in this field both in France and Germany. The physician shares the glory of the surgeon; for in most of the cases reported the existence and location of a growth was determined by the physician, the surgeon acting as a trained mechanic, carrying out the principles of his art. This was likewise so in the wonderful case of the successful removal of a tumor of the cord by Mr. Horsley, the diagnosis had been made by Dr. Gowers.

As we in our young state have as yet few experts whose whole study is bent in one direction, it behooves us as surgeons to watch carefully the progress in medical branches, so as to apply it in our art. Truly, a good surgeon must be a good physician, especially if he practice general surgery.

OPERATIVE TREATMENT OF COXITIS.

By A. F. Jonas, M. D., Omaha.

The following cases shall serve to illustrate a method of radical operation for a class of disorders that have taxed the ingenuity, skill and patience of all practitioners of medicine, whether engaged in general practice or devoted to surgery exclusively. Every practitioner of experience will tell you of the long inflammatory processes; of suppurative destruction; of bone lesions; of the deformity and frequent death in cases of *tubercular inflammation of the hip joint*, and I ask your indulgence to-day while I relate my more recent experience in the operative management of tubercular coxitis.

W. H., aged 12.—Fell from a horse, two years previous to the date of consultation, upon his left hip. Pain has been continuous ever since, confined almost wholly to the knee, with alternating improvement and aggravation of symptoms.

Status præsens.—Thigh is flexed on abdomen, adducted and apparently fixed. The upper end of the trochanter major is not above Roser-Nelatons line. On the outer aspect of the thigh, beginning at the upper end of the trochanter major and extending downward to the junction of the upper with the middle third of the femur, we find a fluctuating tumor, which is painless and without redness. Any movement of the thigh induces acute pain. Under an anæsthetic we can establish the fact that the head of the femur rests within the cotyloid cavity and is probably free from organic change. The abscess burrows under the tensor vaginæ femoris, and is undoubtedly the result of an inflammatory centre located at some point on the trochanter major.

An incision was made over the site of the large trochanter, beginning at its upper border and extending downwards four inches.

An enormous abscess cavity is laid open. Six ounces of thin, creamy, odorless pus was evacuated. The abscess cavity was lined throughout its whole extent with a characteristic tubercular membrane. A sinus extends inwardly and to the anterior aspect of the trochanter ending in a centre in the neck of the femur at the outer edge of the capsule. The abscess membrane was removed with a Volkmann's sharp spoon. The tubercular centre in the bone was excavated with a chisel and sharp spoon. The entire cavity was irrigated with a large quantity of sublimate solution, so as to thoroughly wash out all diseased masses. A drainage tube was introduced, and the wound carefully sutured. Union followed per primam. The limb was immobilized. Complete recovery ultimately ensued.

Case II., Mary G., aged 5 years.—Fifteen months previous to the first consultation the patient began to complain of pain in the right knee, and began to limp. After several months she refused to use the limb at all. She has been confined in bed nearly one year. Has worn a modification of a Thomas splint, also undergone extension and counter extension, but with no benefit.

Status præsens.—Find her pale and emaciated, lying in bed, the right limb is flexed, adducted, shortened, and apparently immovable at the hip joint. Under chloroform narcosis, we find the head of the bone within the cotyloid cavity, but very easily displaced from its socket, upward and backward. Crepitation can be distinctly felt. Resection is recommended, and performed July 30th, 1888.

Operation.—The patient is placed on her left side. An incision is made, beginning at a point directly over the upper end of the trochanter major, and extending downward three and one-half inches. The attachments of the glutei, pyriformis, obturator, internus and externus, gemelli and quadratus femoris were severed, and the joint brought into view. A large periarticular abscess containing four ounces of pus was evacuated. The end of the femur is elevated, the head is severed with a chain saw, the line of incision passing from the lesser through the greater trochanter. The capsule was found to be thickened, infiltrated with tubercle, and was entirely extirpated with scissors. The cartilage in the acetabulum is almost entirely destroyed, and the bony structure shows a number of tubercular centres which are removed with a sharp spoon and chisel. The wound is thoroughly irrigated with large quantities of sublimate solution. The wound is carefully sutured, a large drainage tube is introduced reaching to the cotyloid cavity. An antiseptic dressing is applied, and the limb is placed in extension. Union was complete in ten days under one dressing, without rise of temperature.

Extension, with Volkmann's sliding apparatus, is kept up continuously, night and day, for six weeks. The weight is then removed for two hours daily for a week or ten days, gradually lengthening the time of suspended extension each successive day, until the weight can be dispensed with for the entire day, but to be continued at night, the child being allowed to sit up in bed if it chooses. The eighth week our patient was supplied with a sort of light bench, with legs long enough that she could conveniently rest her hands on it to support the weight of the trunk while in a standing posture. With the aid of this bench she began to move about the room, using the sound leg, barely touching the affected one to the floor for several weeks, at the end of three months the resected limb bore the weight of the body and the child frequently walked entirely without the bench, resting both heels on the floor. Extension was, however, kept up at night until the present time, and will be continued for one year from the date of the operation. AlthoughI still insist upon the use of crutches, she frequently walks and runs without them. The hip-joint has become perfectly movable.

The object of this long continued extension is manifold. First, to compensate for the shortening; second, to habituate her to walk with pelvis lowered on the resected side; third, to so tip the plane of the cotyloid cavity outward and downward as to permit the end of the resected femur to rest in it, thus affording the most favorable condition for the formation of a pseudo-arthrosis.

Case III., Miss K., age, 19.—Nine years ago she began to complain of pain in the hip and knee, which was regarded to be of a rheumatic nature. After a time the pain disappeared with rest in bed. There were, however, very frequent recurrences of pain which always subsided after a season of rest in bed, until recently, the pain, which began nearly three months since, has not disappeared as usual. On the contrary, it has become much aggravated, and the patient has been confined to her bed. Shortening has gradually been coming on for several months, so that at present the right leg is one and one-half inches shorter than the left.

Status præsens. — Patient is pale, fairly well nourished, lies in bed with left leg adducted, thigh flexed, foot turned inward. The hip-joint seems fixed, and any attempts at movement is acutely painful. Under chloroform narcosis the hip-joint is freely movable, and is not dislocated. On grasping the thigh with my right hand while the left rests on the pelvis, the head of the femur can be easily lifted out of its socket, but returns when the extension is removed. This condition is always present where the ligamentum teres has become softened and destroyed.

Since the process is one of long standing, and recurrences have been so frequent, and the probabilities were that there existed bone lesions of a tuberculous nature, an operation was proposed and accepted.

Operation.—An incision was made over the trochanter major, beginning three inches below the upper point and extending upward to the end of the femur, then continuing the incision at an angle of forty-five degrees backward and upward for three inches more, according to the method of Kocher. The attachments of the glutei pyriformis, obturator internus and externus, gemelli and quadratus femoris were severed and the joint exposed to view. The capsule was tensely distended, which was incised, and four ounces of pus escaped. The head of the femur was easily lifted from the cotyloid cavity, the latter was found to be the seat of extensive destruction, the cartilage being almost entirely destroyed. The cartilage on the head of the bone was attached to it like bits of rags and dropped off as the head of the bone was removed with a chain saw. A tubercular centre was found in the spongy portion of the neck, which communicated by a canal or sinus with the articular capsule. This centre was undoubtedly the beginning of the tubercular process. The cotyloid cavity was carefully scraped, and all affected portions were removed. The capsule, being infiltrated with large masses of tubercle, was entirely extirpated. The wound was carefully irrigated and flushed out, a drainage tube was introduced in either end, the flaps were brought together with silk sutures. Union was *per primam* and afebrile. Extension was applied. The drainage tube in the posterior end of the wound did not drain perfectly, owing to the fact that the outer end was sometimes closed by pressure of the weight of the buttocks. It is my plan not to remove the drainage tubes for at least fourteen days after union has taken place, and it was at this time that the posterior tube became clogged up at times. In future operations of this kind, although I shall employ Kocher's method of incision, because it exposes the joint in a way that no other incision does, I shall avoid putting a drainage tube in the extreme upper end of the wound. Six weeks after the operation the drainage tube tracts opened again and discharged a thin pus. The temperature rose to 101 degrees fahrenheit; some pain on movement, but soon subsided after thorough irrigation. This condition no doubt originated from pent-up secretions that were not perfectly eliminated by way of drainage tube.

Case IV., Y., age 3½ years.—Six months previous to my first visit, the patient began to complain of pain in the right knee and "favored" the leg; very soon the pain became aggravated and he ceased to use the leg entirely. An extension apparatus was applied, but without any marked benefit.

Status præsens.—He appears pale, well nourished, is very irritable. Right limb adducted; flexed; toes turn inward; pelvis follows every movement of the leg; there is no marked lordosis; leg one inch shorter than its fellow. Trochanter major one inch above Roser-Nelatons line. Under chloroform narcosis, we can push the end of the femur on to the dorsum ilium and pull it back again into the cotyloid cavity. A distinct crepitation is felt with every movement. In this relaxed condition the limb can be readily brought into its normal position. Operation is determined upon.

Operation.—The joint is exposed through a Kocher incision. The head of the femur is found above the posterior border of the acetabulum, in a large abscess cavity; its articular surface is perforated in numerous places. The ligamentum teres is entirely absent. A large tubercular cavity is found immediately under the articular cartilage of the head of the femur. The head is removed with a chain saw. The remaining remnants of cartilage, together with abundant masses of granulation tissue were removed from the acetabulum with a Volkmann sharp spoon. The capsule is removed with scissors. The wound is carefully flushed out with sol. carbolic acid and an aseptic dressing applied. The leg is put in extension on a Volkmann sliding splint. Union per primam and afebrile.

In discussing the foregoing cases I have omitted the consideration of the symptomology, because this in itself would lead us far beyond the bounds of our paper. I have attempted to detail as briefly as is consistent with the importance of this subject, the more important points in connection with the pathology and general management of tubercular coxitis.

The older surgeons spoke of crasis and humors of the blood, and it was seldom that a primary origin in a centre was spoken of. They gradually began to speak of fungoid arthritis as they observed granulation tissue in the capsule and particularly under the articular cartilages, perforating the latter, and they referred to a primary ossific arthritis.

It is of comparative recent date that coxitis has been recognized in its true light. Today we know that such processes, be they in the capsule or in the bone, have only a secondary significance, and are partly the result of an infection, partly reactive, reparative or progressive inflammations.

Fungoid arthritis begins in the majority of instances from a centre or focus, containing the noxious material, lighting up an inflammatory process, extending to the synovial sac and capsule, gradually destroying the integrity of the joint.

The primary centres are found constantly on or in the bone, at a greater or lesser distance from the articular cartilage, but nearly always in the spongy portion of the epiphysis, and in rare cases they have been discovered in the diaphysis. These centres are usually small, seldom exceeding the size of a cherry stone, and constantly exhibit a cheesy or tubercular character, as you observe in the specimens before you.

Fungoid arthritis, in children, seldom begins primarily as arthropathic, but as an osteopathic process, with a circumscribed cheesy or tuberculous ostitis, and much depends on the the situation of the tubercular centre. Whether the joint becomes involved or not will depend untirely upon the point of perforation. If the centre perforates within the capsule as it does in the majority of cases, we have a typical arthritis fungosa. If on the other hand, the point of perforation is extra-capsular, the joint remains intact, or these centres may become encapsulated, undergo contraction and even absorbtion without presenting any severe clinical manifestations, or having accomplished any damage.

These tubercular joint processes are usually preceded by a stage, where the affection lies latent in the bone. A stage of varying duration and may last for years, for the very beginning and formation of these centres is without symptoms. When the child complains of pain now and then or "limps" and favors the limb, the focus has become thoroughly developed and has set up an active inflammatory process. The most careful examination is often negative. The capsule may be already more tensely filled than normal; the synovial surfaces have become very vascular and swollen and present the character of a granulating surface. The increased synovial fluid may appear turbid, containing lymphoid elements. If the secondary joint irritation has become a more active one, we may be able to observe in the early stage muscular contractions of the adductors, flexors and rotators, establishing a distinct picture of coxitis, and yet in this stage we may not be able to observe any structural change in the joint cavity. In an anatomical sense, the tubercular arthritis has not yet begun, but the symptoms are produced by the irritation being transmitted from the imflammatory focus to the joint surfaces, and again in another class of cases the structural changes may be so great as to have entirely destroyed the articular surfaces, that is, when the tubercular centre discharges its contents into the capsule. The suppurative process may have completely distended the capsule.

Foci situated in the centre of the neck of the femur, or in rare cases, in the trochanter major, lead first to an obliteration of the articular cartilages, then these foci spread and destroy the cartilage, then the neck of the femur separates from the head, which often remains in the cotyloid cavity, and the end of the femur becomes dislocated upward and backward onto the dorsum of the ilium.

The arthritic pain is intense in proportion as the synovial surfaces remain in a physiological state. The irritation and pain will be less in proportion as the synovial surfaces become vascular and covered with plastic material or covered with granulations.

We seldom see these tubercular centres in their early stages, not until they have begun to suppurate, and have lead to destruction and infection of the joint. We then find a sharply defined yellow spot in the sawed surface of the spongiosa appearing dry anemic and opaque. The bony structure immediately surrounding it is redened and softened. Often by close inspection we can observe in the immediate surroundings of the centre, a number of grey miliary granules, which are undoubtedly tubercular, or there may be surrounding the focus a thin, pale gray or pale violet jelly-like zone, which under the microscope, are positively recognized as miliary tubercle with their bacilli. Volkmann believes that all tubercular centres originate in miliary tubercle. The cotyloid cavity may sometimes be the primary seat of the affection and occurs oftener than was formerly supposed. And very often the possibility of attaining a speedy recovery after hip-joint resection depends on the removal of not only the head of the femur, but an excavation of the tubercular centres from the bones of the pelvis must not be overlooked.

The danger to the hip-joint begins when the cheesy masses undergo softening, producing reactive changes, especially suppurative changes in the immediate neighborhood of the joint. We find that the infecting centre has left a bone cavity, often occupied by one or more small round sequestra, particularly is this so in children. Everywhere that the tuberculous secretions come in contact with the healthy tissues, we observe an eruption of miliary tubercle, in granulations of the bone which surround the foci, in the walls of abscesses which are formed under the periosteum between the muscles, the synovial sac, the fistulous canals through which the ossific centres communicate with the various pockets and recesses and the extermal air, everywhere miliary tubercle mark the way which the specific products have taken. These alone with their bacilli are the cause of the intractability of the inflammatory process. They are the factors of destruction, they excite the development of luxuriant granulations, they form the barrier in the way of repair in fistulæ and abscesses, and bring about such frequent relapses.

Extra articular perforation of a tubercular center is rather the exception and occurs very seldom. Chronic bone tuberculosis has the peculiarity of developing in the extreme ends of the bone, in the immediate neighborhood of the synovial sac, especially is this true in children of three and four years of age.

To Koster belongs the honor of first having pointed out the existence of miliary tubercle in the granulations of fungoid inflammation of the joints. If tubercular substances are introduced into a healthy joint and is not speedily followed by an abundant vascular and tissue proliferation, we observe miliary tubercle in a thin layer of cheesy pus or pseudo-membrane, and the arthritis takes on less of a fungoid and more of a purulent character. The nodular form of synovialis tuberculosis is rare.

If we incise a large tubercular abscess (as we frequently find them associated with tubercular hip-joint inflammation) and separate the edges of the wound, we observe that

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FOUR SURGICAL CASES.

By B. B. DAVIS, M. D., McCook, Neb.

The man in practice at a distance from a medical center often receives more practical benefit from reading the report of a case treated under similar environments than from numbers of such cases surrounded by the conveniences of the modern hospital. This is my only excuse for presuming to poach upon the readers' time, for, as a rule, the hospital surgeon, from his abundance of material, is in a much more favorable situation than the general practitioner to give instruction. Yet, many times when reading hospital reports, where everything seems so easy, I have wondered how I should proceed with similar cases in a sod house on the prairie, and have felt that a single report of a case under like conditions would at least—"steady my nerves."

Since living in McCook I have met with several trying cases, and from among them have selected four surgical cases which seem to be of enough general interest to merit a reading. They consist of (1) An operation for strangulated femoral hernia; (2) Tracheotomy for croup; (3) Extraction of stone from bladder of a female child aged eighteen months; and (4) Ligation of the common carotid artery for aneurism by anastomosis in an infant of six months.

CASE I.; STRANGULATED FEMORAL HERNIA—OPERATION—RECOVERY.—Mrs. R., married, aet forty-five years. Has had left-sided femoral hernia for ten years. "Frequent attacks of pain and vomiting due to its getting down," but, until the present time, it had always been possible to relieve by applying taxis. Dr. A. J. Willey was in charge of the case, and had successfully treated her through several previous attacks of a similar kind. Failing in the reduction, I was called in consultation, and found the patient suffering a great deal of pain, vomiting slightly, pulse rapid, and facies anxious. Temperature slightly above normal. A thorough trial of the taxis under chloroform anæsthesia was unsuccessful. The condition not being alarming, we decided to wait and see what the morrow would bring forth. The following day the condition was no better, but rather worse, and additional counsel was called. "Conservative surgery" (!) was urged, and another *wait* was instituted. Lobelia fomentations were applied, and the poor woman was doomed to another night of suffering. By the next day the case was desperate. Stercoraceous vomiting had supervened, and the patient was fast sinking. All efforts at reduction of the hernia had proved unavailing, and it was decided to do what should have been done two days before—*operate*. Through the courtesy of my friend, Dr. Willey, I was allowed to do the operation, being ably assisted by Drs. Willey and Stutzman, of McCook, and Dr. Moore, of Oakland. The skin having been washed and disinfected and the patient chloroformed, I proceeded to cut directly down through the skin and fascia to the sac. Picking up with forceps, and snipping the sac, it was freely opened on a director, and found to contain a loop of small intestine and a very much thickened piece of omentum which was gangrenous—a striking demonstration of the wisdom of procrastination! The constriction of the ring having been divided, the loop of intestine was carefully examined, and, though looking somewhat suspicious, it was decided that it would be safe to return it into the peritoneal cavity. Events proved that our judgment had been correct, though I felt uneasy about it for several days. The protruding omentum was transfixed about half an inch above the spachelated portion with a needle armed with a double silk thread, and ligated after the manner of securing the pedicle of an ovarian tumor. The part removed was about two and one-half inches long, one and one-half wide, and almost an inch thick. The sides of the ring were then quickly approximated, and the superficial wound closed with silk sutures, a small rubber drainage tube protruding at the lower angle. The patient rallied nicely, and would have made an uninterrupted recovery had it not been for the rather profuse suppuration, due, I believe, to faulty antisepsis. The cure was radical, and, I believe, permanent.

To sum up in a few words and draw the lessons intended:

I. I would say that in another case of the kind, I should insist upon a much earlier operation, for it was most hazardous to the life of this patient to postpone active interference so long. The chance of success is so much greater when the operation is done earlier, that one thorough, unsuccessful trial of taxis under anæsthesia ought to be enough to decide us to proceed with the operation. Even if by delay a small percentage of strangulations are reduced without cutting, such patients still have their herniæ to torment them and are in constant danger of a recurrence of the trouble. The risks of an operation undertaken within the first few hours after the accident occurs are not great. (2) Greater care should have been taken in the use of antiseptics. The accident of suppuration ought to be exceedingly rare.

Case II.; Diphtheritic Croup—Tracheotomy—Recovery.—Rose W., a slender brunette, aet eight years. Was called to see this patient and found the tonsils moderately swollen, some small patches on each tonsil, and made the mistake of supposing I had a case of follicular tonsillitis to deal with. Called again the next morning and found the patient so much better that I had dismissed the case from my mind, when thirty-six hours later I was informed that severe symptoms had supervened and was asked to see her again. Found the patient with labored breathing and a well developed case of croup on my hands. On inspection of the fauces the patches were found to have disappeared. Was informed that the patient had been playing in the yard that morning, feeling almost as well as usual.

Treatment.—Chlorate of potash and tincture of the chloride of iron every two hours, alternating with bichloride of mercury, gr. $\frac{1}{100}$ Also free stimulation with brandy, and steam inhalations. Was summoned the next day at 5 A. M. and found patient with very labored breathing and much cyanosis. Came to the conclusion—the larynx was filling up so rapidly—that tracheotomy should be done.

But the parents were not yet prepared to give their consent to so radical a measure. At 11 a. m., in company with Dr. Kay, I called at the house, and we found the patient, from all appearances, breathing her last, obstruction in the larynx being almost complete, the face almost black from carbonic acid poisoning. The father implored me to perform tracheotomy, or do anything to save his child. I told him it was too late to expect to save her, and that if it was attempted, she would probably be dead before we were half through with the operation, but that, if he wished it, we would attempt it. He implored us to proceed. and assisted by my friend, Dr. Kay, I rapidly dissected down to the upper tracheal rings, and, quickly wiping away the blood, opened the trachea by severing the first and second rings. A large piece of membrane was grasped and easily removed, after which a hard rubber tracheal tube was readily inserted. But, before this was accomplished, the patient stopped breathing, and we thought her dead, though as soon as the tube was introduced, we began to apply artificial respiration, not really expecting results, but in obedience to the instinct for preserving human life. Continuing this for some moments we were rewarded by seeing the patient gasp, and in the course of ten minutes she was breathing calmly and freely. The cyanosis quickly passed away, and she fell into a quiet sleep which continued for more than an hour. Within a few hours the membrane was found to be extending downward below the lower extremity of the tracheal tube, and for four days I had scant hope of saving my case. The tube would frequently become obstructed with fragments of membrane and mucus, and

I was compelled to remain with the little patient day and night, (we had no trained nurse,) cleaning the tube every few minutes. It was ten days before the membrane ceased forming so that I ventured to finally remove the tube.

This case may have seemed more desperate to me from the fact that during my college course and hospital service, I had never been so fortunate as to witness a case of Tracheotomy. I do not wish soon to pass through a similar experience. The reader will doubtless suppose that the suspension of respiration was due to the introduction of air when the trachea was opened, but the respiration ceased before this point in the operation was reached.

Intubation with O'Dwyer's tube I am satisfied would not have been applicable to this case on account of the unusually low descent of the membrane. For a time it looked very much as if the membrane was not confined to the larynx and trachea, but had descended into the bronchi.

That this case was diphtheritic I feel confident, for three other members of the family had undoubted diphtheria of a mild grade, while Rose was still wearing the tube. My own opinion, moreover, is that all cases of laryngeal membrane are of dightheritic origin. The point on differential diagnosis recently made by Dr. C E. Billington that, when the first appearance of the membrane on the tonsil is marginal it proves it to be diphtheria, while follicular tonsillitis is characterized by a central location of the patch, might have prevented my first error in diagnosis at the beginning of this case; though it is doubtful whether the croup would have been prevented.

CASE III.; STONE IN THE BLADDER—OPERATION—RECOVERY.—Leta P., female, aet 18 months. Has been a great sufferer for nine months. At the age of nine months she began to scream with pain whenever the bladder was evacuated, and prolapse of rectum was noticed soon after. Since that time the patient has constantly been growing worse. She has been under treatment for "ulceration of the rectum and chronic inflammation of the bladder." With Dr. Kay an examination was instituted. The patient was found to be greatly emaciated and her countenance eloquently told that she had endured much suffering. Every few minutes a severe straining came on and a few drops of urine were voided. At such times the rectum literally turned inside out, and it was often a matter of extreme difficulty to push it back. The rectal mucous membrane was greatly congested and somewhat ulcerated. On passing a probe into the bladder it at once struck upon a stone—the cause of all her sufferings. We determined to attempt to remove the stone through the urethra, and this canal was slowly and carefully dilated by means of Wylie's cervical dilators, until I could pass my little finger into the bladder. Only one stone was found and it was so large that it was grasped with forceps and removed through the urethra with the greatest difficulty. It was as large as a good sized marble, almost round and weighed sixty-five grains. We feared incontinence, but after twenty-four hours the urine was retained perfectly. After twenty-four hours the rectum ceased to "come down" and the child had an uninterrupted recovery. Her health is now as perfect as could be desired and it is hard to realize that she is the same child.

The size of this stone seems remarkable, considering the patient's age. I have not access to statistics on the subject but am of the impression that the case is an unusual one.

Such extreme dilatation of the urethra will not be likely to meet with approval among the more conservative members of the profession, and, I admit, that when the stone is so large, lithotrity, or the supra-pubic operation would probably be safer. Until partly through with the operation, we did not realize that the stone was so large, and then the absence of a good crushing instrument, compelled us to do what our best judgment condemned. The happy termination of this case should blind no one to the dangers of such extreme dilatation in so young a child.

CASE IV.: ANEURISM BY ANASTOMOSIS OF ORBIT AND UPPER EYELID—LIGATION OF COMMON CAROTID ARTERY—IMPROVED.—Nora P., female, aet. six months. At the age of two weeks a bluish discoloration of the right brow and upper lid was noticed by the parents. It was soon found to be growing and it has continued to increase in size until it has attained gigantic proportions, the tumor hanging down over the cheek as far as the angle of the mouth. At every stroke of the heart the tumor rises and falls, and there seems to be momentary danger of rupture and hemorrhage. Carefully reviewing all the operations used in such cases, I felt that the indication was to cut off the blood supply. The most effectual way of doing that, seemed to be, to ligate the common carotid artery. Accordingly, on July 23d, Dr. Z. L. Kay, of McCook, and Dr. J. A. Gunn, of Arapahoe, were called to see the case with me, and they fully concurred in the plan of treatment proposed. With their assistance I cut down upon the artery and ligated just above the point where it is crossed by the omo-hyoid muscle, using two juniperized catgut ligatures, one-third inch apart. The external wound was closed with a continuous catgut suture. On account of the position of the wound and the age of the child, it was found to be impossible to retain the dressings perfectly, but, in spite of this, union by first intention occurred the whole length of the wound. The patient suffered from no bad symptoms whatever, and the tumor has gradually been decreasing in size, until now the baby can open her eye and see perfectly. I think it a question of a short time only till the cure will be complete.

In a general practice outside the large cities, as compared with our city brethren, we see few surgical cases; and consequently, our technique is often faulty. Suppuration is becoming more and more to be looked upon as a reproach to the surgeon. The country surgeon ought to be as careful in the use of antiseptics as his city contemporary, and, if so, his results ought to average even better. There is one other reason why the mortality after operations is sometimes higher than it should be. It is because too many of us regard an operation as a *dernier resort*, and radical interference is postponed until the condition of the patient becomes alarming. Then if an operation is followed by death, we are criticised for doing it at all—not for the true cause of the disaster—too great delay.

*PHANTOM PREGNANCY.

By R. M. Stone, M. D., Omaha.

On February 4th, 1884, I was consulted by Miss X., aged 27, who gave me the following history:

Her first menstrual period came when she was 15 years old. She flooded for two and one-half days. Her second period was eight month later, when she flooded again. The third period came after two and one-half months.

In 1877, without many symptoms there came from the vegina a flow of pus; the amount was so great as to necessitate napkins for three or four weeks.

In 1882, she had a similar condition for seven or eight weeks. In February 1884, again the same for a few days.

Her weight was about ninety-eight pounds. She was very nervous; suffered from palpitation of the heart and dyspepsia, but was always very regular as to her movements of the bowels.

All her life she has had pain in the left iliac region. Her bladder has been very irritable and she has for years urinated from fifteen to thirty times a day.

Now to resume as to her menstrual history:

In 1883 she menstruated in June, October and December, one week at each time. From December, 1883 to February, 1885—twelve months there was no menses. In 1885 she menstruated three times, one week each time. In 1886 twice, of one week each. In 1887 three times, still a week each time. In 1888 she had a flow of one week in February, so that in four years she had eleven menstrual periods only. Each one of these was of one week's duration; was very profuse, accompanied by clots. The flow was preceded by this left iliac pain which continued during the flow; was very severe, so much so as to keep her in bed most of the time and make her walk lame when moving. Bloating was a very frequent condition.

I was not permitted an examination so that I am not able to report as to the uterus or tubes. In July, 1884, the year she had no menses, she was threatened with a cellulitis, which I was able to abort with hot injections and opium.

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* Read before the Medical Society of Missouri Valley, March 21, 1889.

In 1885, she was married and passed into the hands of a medical man of this city, recognized as both careful and able.

In February, 1888, she had a menstrual flow from the 7th to the 14th. In March this physician was called to see her but was not allowed to examine her. She had nausea, tender nipples, etc., and was supposed by her physician to be pregnant. In May she had a flow, during which she was examined and it was announced to her that she was not having an abortion. The old iliac pain was present during this May flow.

She had already begun to enlarge both as to the breasts and the abdomen.

Nausea continued during March, April and May. In July the doctor examined the abdomen, using also a stethoscope and announced the beating of the fetal heart plainly, the patient after this feeling motion. By this time she was unable to wear her usual clothing and was telling her numerous friends of her interesting and delightful condition. On October 15th she had a flow which lasted a week and was accompanied by much pain.

Her physician saw her but made no examination; he still declared that she was pregnant. The baby basket with its numerous contents was procured and was in the middle of the bedroom for a month. In November the doctor brought the nurse to the house and she remained there two weeks. During November the nurse pronounced her pregnant and as large as women usually were.

On November 17th, without the passage of quantities of flatus, the patient noticed that she began to decrease in size. On December 17th she went to her physician and insisted on his making an examination and learning positively her condition. He did so and said she was not pregnant. She had been overjoyed at the thought of pregnancy, had talked about it freely and the knowledge that she was not pregnant humiliated her so that a violent hysterical condition ensued and she cried most of the time for weeks, worrying about everything great and small, and sleeping very little. She was so humiliated that she could not tolerate her physician's sight, and returned to place herself under my care.

I found her nervous, irritable, full of worry, but physically very hearty, weighing 136 pounds instead of the 98 she had when I first saw her.

Last week she informed me that she had a profuse flow from the 11th to the 17th of March, accompanied as usual by clots, but for once without pain. Under advice to consider her phantom pregnancy as passed, to take into consideration that her friends had now ceased talking about the matter, and to force herself to resume her old household duties, and to dismiss all worry from her mind, she has quieted down and begun to sleep well.

She is now 32 years of age, and has had the queerest and most peculiar menstrual history it has ever been my lot to record. I do not believe she will ever become pregnant, and am very anxious to follow up the case during succeeding years.

The February number of the *American Journal of Obstetrics* has a very interesting report of a case of Phantom Pregnancy, and the discussion of the subject before the Obsetrical Society of New York elicited many other similar and striking cases. I shall take the liberty of presenting a few remarks culled from these cases, together with some opinions there expressed.

DR. NICHOLL'S CASE.—Mrs. A. was confined in August, 1887. Forceps were necessary, and the child was still-born. The mother was extraordinarily depressed, and anxious to bear another child. By December she was as well as ever and missed her December menstrual period; she had nausea in January, and in February had an apparent threat of an abortion; the cervix was found on examination to be large, the os patulous, and the areolæ about the nipples dark. Dr. Nicholl treated her and thought her pregnant, and that he had averted an abortion. Soon the breasts enlarged as well as the abdomen, and in April Mrs. A. felt motion. Mr. A. repeatedly placed his hands on the abdomen, and felt motion likewise distinctly.

Dr. Nicholl found he was not going to be in the city when confinement was due, and requested Dr. Partridge to see her, assuring him that the patient was in good condition. Dr. N. called, however, on her late in August to examine her. He saw that the abdomen was very large, but its outline abnormal. The instant he touched the cervix he knew that the uterus contained no fœtus, and he "ill-advisedly" told her she had miscarried, probably in February, after all.

At once, the patient was overcome by grief, then insisting that she was pregnant, saying that she *could not* be deceived as to the motion of the child, and insisting that the doctor *must* recognize the child's movements. She threatened suicide, and refused to be comforted. Berated the doctor for allowing her to go from February to August without examination, and thus forcing upon her all this sorrow and disappointment. Dr. N. was unable to answer this, and admits that he ought to have examined her.

In the discussion of the doctor's paper, Dr. Jacobus related a case, of a woman who had not menstruated for fifteen months. She had had nausea, movements, increase of size, etc., and yet no abortion until then, when she passed a macerated fœtus, dead, and yet retained several months.

Dr. Gunning related the very remarkable case of a slut whose belly had enlarged, and who prepared her nest, but never littered.

Dr. Abbott had seen two cases where the attending physicians had made no examination whatever, and yet deformed pelvis was present in both cases, and Cæsarean section became necessary in both cases.

The practical lesson that was impressed in the New York Society, and that I wish to urge here, is the necessity of examining all cases. A careful, thorough examination, repeated if need be, will settle the question of pregnancy. It will also inform the examiner of the condition of the soft parts, the position of the child, and enable him to advise, in some cases, a premature, induced labor, necessitated by a small pelvis. In addition to this, looking at the question from a mercenary standpoint, it is necessary. The physician first mentioned in this paper, not only lost a good family by reason of the humiliation caused them, but injured himself very much in the quarter of the city where his patient lived.

DISCUSSION.

Dr. Knott.—I suppose there are not many physicians who have seen cases of this character, at least, it seems to me, from my experience that we are more likely not to run across a case of this kind than that we will, in the course of 20 years. I have seen just one case in the seventeen years I have lived in Sioux City of the kind related by Dr. Stone. Not like it of course in all respects, but a case of phantom pregnancy. There are plenty of cases where there are doubts, but rarely one which might puzzle the doctor for eight or ten or twelve months. I had a case come under my notice. The lady had been married six or seven years, and had no family; she was generally in good health; kept no help and did her own work; she was small and well formed. She stopped menstruating, and after going nearly three months, and having many of the symptoms which others told her belonged to pregnancy, she consulted me. On making an examination, I could not tell whether she was pregnant or not, but was inclined to think she was not. It was a matter of doubt, and since she was feeling well, I thought it would do no harm if she did not menstruate, and asked her to call that I might observe the case. She came to the office as often as once in two or three weeks, until finally the matter was determined. The enlargement went on steadily, and at about the same rate you would expect in a case of pregnancy. I think there was no variation in that particular from what is perfectly normal and natural in a case of pregnancy. The abdominal muscles were so rigid that it was difficult for me to make out the uterus. Can usually make out the gravid uterus after the third or fourth month, but in this case I could not; still I sometimes thought I could feel an enlargement, but generally my external examinations were attended with no result; I could not tell because of the rigid condition of the muscles. Still she went on without a particle of trouble except sometimes more or less pain; the abdomen steadily enlarged, and the breasts also enlarged and became much firmer than usual with her, still there was no discoloration about the nipple, although there was discoloration of the skin about her face as is usually noticed in pregnancy. She was sure she was pregnant, that she felt the motion, and sometimes when I was making an examination she would say, "There, don't you feel the motion?" but I never could. Along about the sixth month I could see no change, and became almost sure she was not pregnant, although I did not become absolutely sure until the seventh month, when she menstruated normally, and the abdomen in the course of two or three days reached its normal size. There was no pain or anything, but it just simply vanished like a bit of vapor, and that is all there was to it. From that time she went on menstruating as usual as long as she lived in that section. That is the sum of my experience in cases of that kind, and it was a very puzzling affair.

Dr. Hart.—This is a class of cases which, I think, are of considerable interest. A case came under my observation in this town. After having reached the expected time of accouchment, I was called in to make an examination, and decided there was no pregnancy. She had all the general symptoms, from first to last in regular progression, but no symptoms of labor coming on, and I made up my mind the case should be thoroughly investigated, which was done. The lady has not, since that time, perhaps, fully regained her normal condition, but her health is good and she is doing her work.

The early history of this case was not so familiar to me as to Dr. Barstow, who had charge of it, and I would be pleased to hear from him in regard to it.

Dr. Barstow.—This case Dr. Hart refers to, the lady had excellent health; she weighed about one hundred and forty pounds, was thirty-two years old, and had been married six years. Supposed she was pregnant and called me in; she thought an examination was hardly necessary, although I examined her, as I supposed, when she was about two months along. At that time, in my judgment, she had all the normal symptoms of pregnancy. Menstruation had become irregular, and after the third month, a total omission. Her health was excellent; she had morning sickness, but did her own work. She declared she felt the motion, and when Dr. Hart was called in we decided she was not pregnant. In less than a week she had regained her normal condition and was doing her own work. She was a woman of good judgment, good sense, and did not take it very much to heart, although she would have liked very much to have had a baby; it is now two years since this happened, and she has enjoyed her ordinary health since.

Dr. Carter.—What caused the enlargement?

Dr. Barstow.—That is the question.

Dr. Carter.—Where was the enlargement located?

Dr. Barstow.—It was absolutely normal.

Dr. Hart.—This case interested me more than anything with which I have come in contact. If any of the gentlemen can give us any explanation I should be glad to hear it. Her appearance, in every way, indicated pregnancy at maturity, when I saw her. It was a mystery to me then, as it is still. Her size was normal, and I could detect nothing to explain her condition.

Dr. Chapman.—About three years ago last fall, I was called upon in a case of pregnancy, and after twenty-four hours hard labor, it was a miscarriage; the labor was very difficult and I had to use the forceps. The lady was about twenty-six years of age, and at this time had been married about three years, and was very anxious for a family. Two years after that time she called me in, and said she was in a family way again. I made an examination, found she was flowing and gave her the regular treatment to stop the hemorrhage, and it all passed off; this was in June. In December her sister came to me and said she wanted me to go and see her, that she didn't believe she was in a family way, (I had made no examination of the case since the time that I speak of, in June.) I made an examination with the speculum and sound, and informed her that she was not in a family way. Of course she was very much humiliated and disappointed, but it went on just the same. After ten months there was no child, and the enlargement disappeared completely. She lived there about a year, and was not in that condition afterwards. After she moved away, of course, I knew nothing about her. She was a woman of perfect health, and about thirty years of age. This case differs from the others cited, inasmuch as she had once been in a family way, had miscarried at the fifth month, and two years afterwards she supposed she was in a family way, and it went on to what she supposed was the ninth month, when she sent for a physician, and found she was not.

Dr. Denise.—What was the process of resolution in your case?

Dr. Chapman.—It just gradually disappeared. In about a month from that time, she came around perfectly natural, but was humiliated and would not go out. I saw her several times during the following year and she was in perfect health. She was a woman who would weigh one hundred and thirty-five pounds and perfectly healthy. The child lived eighteen hours, at the time of the miscarriage at the fifth month, and was perfectly natural.

Question.—What was the necessity for using the forceps in that case?

Dr. Chapman.—I was with her sixteen hours before I used the forceps. I never saw a more difficult case.

Dr. Stone.—[In closing the discussion.]—I think that if a thorough examination, under chloroform, had been made in these cases, the mistake of supposing pregnancy would not have been made, and where we are called in cases of labor, especially where we are not acquainted, we should make a thorough examination under chloroform, and ascertain positively that there is pregnancy.

Dr. Hart.—When there is every reason to believe there is pregnancy, and all the usual appearances are found, I think it is unnecessary to go into a minute physical examination under an anæsthetic. It is only where there is a question arising, that such examination should be made, in my opinion. In this case we have related, there was nothing to call for any particular examination. She had all the symptoms of pregnancy, and was anxious to raise a family; everything was satisfactory, and when nine or ten months had elapsed, and no child, of course a thorough investigation was called for, and the case determined at once.

ALL members of the Nebraska State Medical Society, who wish to have the proceedings of 1888 bound with the proceedings of 1889, will please mail the same to the publisher of this journal at once. Please mark your name and address on the package in order that a perfect record can be had, and to avoid errors. The society proceedings of 1888 can be detached from THE OMAHA CLINIC by taking out the wire binders. Do not send the entire journal, but only the entire proceedings. If you have only a part of the proceedings, send what you have, and we will endeavor to complete the same for you. Your early attention is called to the matter.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.

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OMAHA, SEPTEMBER, 1889.

JOHNS HOPKINS HOSPITAL.

The report in the daily papers of the bankruptcy of Johns Hopkins Hospital, was a wet blanket thrown over the medical profession, who had watched with intense interest its erection and took commendable pride in its completion. We are glad to be able to correct any false impressions that may have been made in that matter, by stating that the Johns Hopkins *University* alone is embarrassed on account of shrinkage of the endowment fund, but the *Hospital* fund is intact, *its* endowment fund having been more wisely invested. Neither pains nor expense have been spared to make this the model hospital of the civilized world, in point of construction and equipment, and it is gratifying to know that ample means are at hand, and likely to remain unimpaired, to enable the trustees to carry out the will of the benefactor.

DEATH OF DR. MILTON LANE.

Dr. Milton Lane died at his home in Lincoln the morning of the 16th inst., after a four days' illness, of acute peritonitis. He was President of the Nebraska State Medical Society last year, and those who were present at the Kearney meeting will remember his commanding and, apparently, well-kept physique, and will be shocked to hear of his sudden and unexpected demise. We have learned none of the particulars of his sickness, and take from the *Bee's* correspondence the following biography:

Dr. Lane was born in Boone County, Indiana, August 13th, 1837. He attended the schools of his vicinity for a time, and afterwards the State University at Bloomington. He then read medicine with his oldest brother, Dr. T. H. Lane, at Lebanon, Indiana, and afterward graduated at the Jefferson Medical College, Philadelphia. In August, 1863, he began the practice of medicine at Rulsville, Putnam County, Indiana, and in 1879 he settled in this city. He was a well-read man, both in medicine and general literature, and was a prominent and active member in the county and state medical societies. He was a member of the Masonic organization and will be buried with Masonic honors.

The Doctor's family consisted of his wife, one child, and his brother, W. C. Lane, well known as an active member of the State Pharmaceutical Association.

Dr. Lane was honored and respected by all who knew him, and his loss is mourned by hosts of friends.

QUININE AGAIN.

In the July number of the CLINIC there appeared an editorial from our pen on the subject of "Quinine." In the article we considered the question of the proper dosage of quinine, solely and alone. No other question was considered. Our language was plain, terse, and very courteous. We stated our individual opinions and observations in a manner that could not be misunderstood. We made *no personal attack on anyone*, did not use bracketed interrogation points, [?], indicative of doubt or ridicule. We did *not* characterize the views and opinions of those who might differ with us, as "captious," or "mere twaddle," nor designate them by the opprobrious epithets "homœopaths" and "nihilists." Of the 3,500 readers of the CLINIC, not one could tell from our language whether Jones or Smith gave "60 grains of quinine" or no quinine at all, through fear of "quinine chills." But alas! for us, our inoffensive and courteous article was the means of bringing down upon our devoted head a storm of ridicule in the shape of brackets, harsh, unpleasant adjectives, and other literary brick-bats.

Now a word by way of friendly advice. In the first place, we are anxious to make the CLINIC popular. We believe that it will be to our interests to have more correspondence, a greater number of letters from our subscribers, and to this end we now cordially invite our friends to make use of our pages. They will be most heartily welcomed. But please do not attempt to annihilate us with a shower of words, for nothing can be accomplished by it. We are encased in an armor thicker, tougher and less vulnerable than the hide of the oldest pachyderm that ever disported in playful abandon and chewed Egyptians in the waters of the ancient Nile.

Now we wish it understood, that these few remarks are of an impersonal character, and not directed to any one or two individuals, but are designed to be useful and profitable to a thousand and one of our readers.

And finally, bear in mind that the writer is in the most calm, placid, peaceful, contented, unruffled state of mind imaginable, and that we propose to remain in that condition of beatitude. We shall not, on the one hand, draw upon the mud-pool of ridicule and vituperation for ammunition in our debates, nor on the other hand, shall we resurrect from the dim, misty past, long since buried and almost forgotten memories.

JAMES CARTER, M. D.

TESTICULAR JUICE.

In the August number of the CLINIC we had something to say anent the subject of "The Elixir of Youth," which was then in its infancy, and the fascinating claims made for the elixir, or testicular juices of animals, were still to be determined by actual experience. But the world does move in the field of medicine as well as in other affairs of man, and sometimes with astonishing velocity. Within the last four weeks, several hundred experiments with the elixir have been made throughout the country with the following results: In a few instances only, the patients operated upon declared themselves benefitted by the treatment; a very large majority, experienced no effects whatever, while a few were the victims of abscesses, gangrene and seepticæmia, terminating fatally in some cases.

Profiting by the experience of their fellow practitioners abroad, composed so largely of negative results, and a small number of extremely disastrous cases, the Omaha physicians wisely concluded to drop the matter of experiment and allow it to drift into innocuous desuetude. They have accordingly relegated "The Elixir of Youth" to the realm of *forgotten non-utilities*, where it may disport in playful abandon with the "blue glass" craze, and where the grand company of kindred souls in reunion may welcome the last but not the least of man's follies to the chaos of forgetfulness.

JAMES CARTER, M. D.

THE OMAHA MEDICAL COLLEGE.

The ninth annual session of the Omaha Medical College will open Tuesday, the 1st of October. In the evening, at 8 o'clock, an address will be delivered at the college building, Pacific and Twelfth streets, by the Dean, Prof. Don Macrae, M. D., of Council Bluffs. Other interesting exercises will be held at the same time, which are not yet matured. A cordial invitation is extended to the profession to attend, and thereby revive their reminiscences when they themselves sat on the back seats.

⁂

The class for the coming winter bids fair to surpass in numbers any preceding one. We take occasion to urge those who contemplate matriculating to do so at once, and not wait till the school has opened for a week or more. A student to do good work should attend from beginning to closing, as there is not too much time allotted, at best. The disposition of applicants for the degree of M. D., to obtain the title with as little labor and qualification as possible, is too commonly shown, and the O. M. C. does not want that class.

THE following announcement has been received:

We, the undersigned, do hereby give notice, that according to the resolution passed at the Washington meeting, September 9, 1887, the Tenth International Medical Congress will be held in Berlin.

The congress will be opened on the 4th and closed on the 9th day of August, 1890.

Detailed information as to the order of proceedings will be issued after the meeting of the delegates of the German Medical Faculties and Medical Societies at Heidelberg on the 17th of September in the current year.

Meanwhile, we should feel sincerely obliged, if you would kindly make this communication known among your medical circles, and add at the same time our cordial invitation to the Congress.

VON BERGMANN.
VIRCHOW.
WALDEYER.

Correspondence,

ADHERENT PLACENTA AND HOUR-GLASS CONTRACTION COMBINED.

By L. R. Markley, M. D., Kimball, Neb.

Editor Omaha Clinic:

I see considerable in the Journals of late on adherent placenta, and last year a number of cases of hour-glass contraction were reported. As I do not remember seeing a case reported in which both existed, I take this occasion to report to your readers a case under the above title.

As this was my first case in which the entire placenta was firmly adherent and also the first in which I had met with a true hour-glass contraction, it was a pretty interesting one, at least for the time being. I have no doubt that most physicians in their first year's practice meet with cases which they thought at the time there was adherent placenta, when in reality it was simply held by a slight contraction of the cervix, or internal os.' To introduce the hand into the vagina and then pass one or two fingers into the cervical canal and hook them around the placenta and carefully withdraw it, is a very simple procedure as compared with removing a true adherent placenta; and when an hour-glass contraction blocks the way it is doubly difficult.

On the night of April 16, 1889, was called about fifteen miles into the country to attend Mrs. C., in her first confinement. She is a medium sized woman, about twenty-two years of age, and lives in a small dug-out of only one room, ground floor, with one small window, ventilation was consequently very poor. (A dug-out is a house under the ground the roof alone being above ground.)

The husband met me at the door and said: "the child was born an hour ago but the after birth had not come away yet." Found a number of neighbor women present; this, with a table, stove and bed, left me barely standing room. Was informed there had been no uterine contractions to speak of, since the the birth of the child.

Placed my left hand over the uterus and found it firmly contracted, but by its size knew the placenta was still in-utero. Did not make a vaginal examination, but taking the cord in right hand proceeded to deliver by the regular method. Could not induce the slightest contractions by friction of the uterus and slight traction on the cord. I now made a vaginal examination; found the os rather firm and contracted. As my patient was afraid of being hurt, I did not examine any farther and thus failed in detecting the trouble. I now gave her a dose of ergot, which I seldom do. After waiting nearly an hour I gave another dose of ergot. In thirty minutes she experienced one or two slight pains.

As I again failed in delivering the placenta by the usual method, I introduced my hand into the vagina; the os was no more firm than at first examination, but when I attempted to pass my finger up the cervix, found it rigidly contracted.

I had an hour-glass contraction to deal with and no mistake. I informed the patient what the trouble was, and as she did not wish to take chloroform, I proceeded at once to pass my hand into the uterus, supporting it externally with my left hand. It took me, perhaps, half an hour to get my hand into the uterus. The perspiration streamed down my face and my hand felt as though it was being crushed in a vice; it was lame more than a week. If I relaxed my efforts in the least my hand would be forcibly expelled, and then I would have it all to do over again.

When at last I had my hand in the uterus, thought that I would soon be through, but alas! the tug of war was just commencing.

I informed the patient and friends that the placenta was firmly adherent. Inch by inch the placenta was slowly torn and scraped off with my finger nails, making a clean sweep as I went.

Finally I got it all detached, and carefully removing a few small shreds, I seized the placenta in the palm of my hand and carefully withdrew it. The entire surface of the placenty was adherent. The cervix never relaxed during all this time. My hand was so cramped could not open it for some time and I was completely exhausted. My patient bore the terrible ordeal well.

As I was afraid of inflammation I left some

Dover powder, quinine, aconite and veratrum, with instructions how and when to take. Ordered warm carbolized injections every four to six hours and the napkins over the vulva to be changed often and wrung out of hot carbolized water.

About thirty-six hours after confinement cellulitis set in in the right side, but with the addition of a sinapism to the above remedies the inflammation soon subsided.

She got along nicely until May 6th, when she had an attack of muscular rheumatism which was soon controlled with appropriate remedies. I saw her in town a short time ago. She is in excellent health and looks better than she has since coming west.

Remarks.—The query naturally arises, how much if any, was the ergot responsible for the hour-glass contraction?

In this case I believe the condition was present before giving the ergot, if so, then it no doubt, intensified the contraction, and chloral hydrate in good doses would have had the opposite effect, although it might not have relieved the contraction entirely. Believing that parturition is purely physiological, I do not believe in the general practice of giving ergot either just before or after the child is born. I say this with all due deference toward my teachers who taught me otherwise. I seldom give it at all; why should we give medicines in health?

I believe that ergot is sometimes the cause of such contractions. After the placenta is expelled I always grasp the uterus in palm of left hand and keep it there until it is firmly contracted and pulse near normal. This, I believe, is all that is necessary to obviate post-partum hemorrhage.

A CHILD SWALLOWS A PIN.

Editor Omaha Clinic:

Seeing in an old number of the *Medical Record* a few days ago a case of a child that swallowed a cent, and passed it per anum, without any unpleasant symptoms, I was induced to report the following, which I believe to be of equal interest.

A little girl twenty months old while playing around where her mother was sewing was noticed to gag. The mother, to see what was the matter, ran her finger into the child's mouth and found a pin. In her endeavors to remove it, she pushed it into the throat beyond her reach. The father immediately came to me, but did not bring the child. Upon inquiry, I found the child did not seem to be suffering in the least in any way. I concluded the pin had been swallowed and was beyond reach, and told the father that, as long as no symptoms showed themselves, to do nothing, but in case of the appearance of any trouble to let me know. In about forty hours the pin was passed imbedded in the center of a mass of normal feces. It was found to be a brass pin, and was very black, but of normal size.

A. C. Ames, M. D.

Oxford, Neb.

M. V. M. S.

Omaha Clinic:

The fifteenth annual session of the Mississippi Valley Medical Society was held at Evansville, Indiana, September 10th, 11th, 12th, 1889, with the president, Dr. Geo. F. Cook, of Indianapolis, in the chair, the secretary, Dr. R. L. Thompson, of St. Louis, at the desk, and the chairman of the Committee of Arrangements, Dr. A. M. Owen, of Evansville, was everywhere. The attendance was good for this "side-tracked village in the pocket of Indiana."

The president, owing to the immense program, about 100 papers, begged to be excused from a formal address, and made only a few opening remarks. Dr. A. M. Owen failed entirely to find words to express the warm welcome for himself and the city of Evansville towards the visiting physicians.

The social feature of the meeting was not omitted. The whole day was spent in reading and discussing papers, and the whole night, at least by some of the company, was given up to social enjoyment. On the evening of the first day, a banquet was given the society in a most beautiful grove, at which about 500 doctors and citizens, with their ladies, sat. The weather was unimpeachable, so was everything else. A number of toasts were called and responded to, and Dr. I. N. Love, of St. Louis, as toast-master, made the woods ring. On the evening of the second day, a complimentary ball and concert was given which was attended also by a large number, and was a very enjoyable affair. On the evening of the third day an excursion was made to Newburg. Besides these, there were a number of other social features of a private nature. Evansville did herself proud.

Prominent gentlemen from without the Mississippi Valley were present, among whom were Drs. Geo. H. Rohe, of Baltimore, and W. C. Wile, of Danbury, Connecticut. Dr. Wile brought with him a number of decorations of the Order of Connecticus, which he conferred on some of the members. The badge consisted of wooden nutmegs attached to the coat button with a green ribbon.

It is the earnest desire of the members to interest the profession of the whole Mississippi valley. * * *

CINCINNATI, O.

Medical Progress.

A PLEA FOR ASSAYED PREPARATIONS.—We are glad to see the medical journals discussing the necessity for assayed pharmaceutical preparations of drugs, for it is by the specification of such in their prescriptions by the medical profession that pharmacists will be led to keep them in stock, the manufacturers generally induced to supply them.

It is with pleasure then that we reproduce from the Pittsburgh *Medical Journal*, July, 1889, the following plea for standardizing officinal preparations:

Year after year the profession of medicine witnesses the evolution of new truths, and reforms coeval with these discoveries. Theories that have been tacitly accepted and believed to be founded on fact for ages are, one by one, disproven. Symptoms of disease are duly recognized as being the effect of a cause and the treatment applied accordingly. Based on this knowledge medication assumes the nature of scientific accuracy. Certain substances found in the animate and inanimate worlds possess known action on the human organism; many of these have been in use for centuries on purely empirical grounds.

Many drugs, of vegetable origin especially, have been esteemed since the earliest times though their active ingredients were unknown. They were exhibited either in an almost crude form, or the active constituents were extracted by water or some other solvent, and administered according to the weight of the crude drug; no attention being paid to the varying amounts of constituents. This unscientific procedure obtains to a great extent at the present day, although the physiological and other effects can be referred back to some special ingredient, and this ingredient susceptible of isolation without great difficulty.

As long as a given amount of roots, bark, leaves, etc. irrespective of the amount of the active matter contained, is all that is required to make a given amount of extract, fluid extract, tincture, etc., so long will the results obtained by the administration of these preparations, remain variable, not to say often disastrous to the one whom they are supposed to benefit. The percentage of alkaloids, neutral principles, etc., is so subject to circumstances surrounding the plant, or they may so deteriorate through long keeping or faulty collection, that accuracy in strength in the officinal preparations is out of the question, unless some other method is resorted to than is now recommended, in the majority of cases, by the U. S. Pharmacopœia. There can be but one solution to this problem, namely: to standardize all officinal preparations made from drugs containing active ingredients in sufficient amount for isolation. —Park, Davis & Co. offer a line of standardized fluids called Normal Liquids, which are very popular among careful physicians.— When this cannot be done it were well to relegate the drug to a secondary list in keeping with its importance.

As it is, the Pharmacopœa is burdened with many substances for which a place is retained, mainly out of respect for their ancient reputation, a reputation which they fail to substantiate when subjected to modern tests.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,
208 So. Fifteenth Street, Omaha, Neb.

the entire abscess surface is lined with a pale grayish yellow or violet membrane, which is ½ mm. thick, and is loosely adherent to the neighboring tissues by a zone of soft jelly-like granulation tissue. This membrane is so loosely attached that portions ot it may be pressed through the incision. In no other form of abscess do we know of a membrane so easily detachable.

The articular cartilage may become perforated or detachad and succumb entirely to the suppurative process. In some instances its surface presents an enormous vascular development, with connective tissue deposits, (a condition spoken of by Heuter as chondritis pannosus) and not infrequently we find perforations over the site of the foci in the bone.

It has been a matter of dispute whether the affection ever originated primarily in the synovial membrane. This has been difficult to determine on account of the smallness of the tubercular centres. Volkmann claims to have observed a number of cases in adults only and he thinks it never occurs in children. These cases have an unfavorable prognosis. They appear under the form of indolent suppurative arthritis. The joint becomes tensely filled with pus, the synovialis is covered with large tubercles and is slightly vascular. The cartilege is largely destroyed, the bony epiphysis is extensively denuded. Usually this form of arthritis is only a part of an extensive and general tuberculosis. The majority of these cases suffer with lung and intestinal tuberculosis or very soon become so.

We now turn to a very important question: Can a tubercular process remain local? Is it not always followed by a general infection? Under the light which we possess at the present day, we may answer the former question in the affirmative and the second question in the negative. Tuberculosis may be and is, in the majority of cases, local. Tuberculosis of the lungs and peritoneum usually remains local and only in exceptional cases it becomes general. Scrofulous glands, so called, have been shown histologically, by Rindfleisch, to be tubercular; the tubercle bacilli have been found and demonstrated by Schuchart and Krause, and yet no one asserts that the affection ever become general. The walls of the glands seem to afford a sufficient barrier against general infection. We have seen how slow the repair is in an ulcerated gland of this kind, and yet how rapid the repair when removed in toto. In hip-joint tuberculosis I have shown how the abscess cavity becomes lined with granulations, tissue and an abscess membrane, affording a sufficient barrier against general infection. The term *local tuberculosis* was first used by Rindfleisch. Individuals suffering from tubercular arthritis, usually belong to families where hereditary scrofulosis or tuberculosis can be traced. Many of these cases will succumb later to tuberculosis of some vital organ. Children often die with tubercular meningitis; others with intestinal and lung tuberculosis.

The percentage of recoveries from operative interference in children is much greater than in adults. A person attacked between the ages of 20 and 40 years with fungoid coxitis dies more frequently from lung tuberculosis than young children under the same conditions.

As we turn to the management of tubercular arthritis of the hip-joint, I will only hint at the measures employed in the early stages, since it is with that stage of the affection that we have to deal when operative interference becomes imperative. All the cases which I have related have passed beyond the point where extension and counter extension, immobilization in its various forms, could be productive of benefit.

Here arises an important question: At which particular period shall we recommend operative procedure? When has the case passed beyond the point where conservative measures fail to produce their object? This point does not depend upon a question of weeks and months, some cases running their course in a few months, while others will hardly present the same amount of destruction in as many years. As you have seen in the cases which I have detailed. The little boy (case iv) the progress was so rapid that in six months there was almost a complete destruction of the joint surfaces and capsule, while in case III there was hardly the same amount in nine years, and again in case No. II we find the same amount of change in about eighteen months. We say the early stages, and by early stages we mean that phase of the affection where there is pain and inability to use the limb, before destructive tissue change has taken place. It is true, the great difficulty lies in the fact that it is often difficult to ascertain the time when suppuration begins. Yet in the majority of instances we can recognize—under narcosis—the time when the destructive process has begun, while on the other hand, we will see cases of one or more years standing, where the most careful examination—in anesthesia—prove negative, and yet the articular cartilages may have almost entirely disappeared. We see from this that we have before us a problem that is not so easy to solve.

I believe it is safe to assert that if after eight months or one year of persistent conservative measures, we find no amelioration of the symptoms, that is, if there is an immediate return of the former symptoms upon a removal of the extension or immobilization, or whatever your conservative measures may have employed, you may rest assured that we have to deal with a bone lesion. Again, if there is a relapse in six months or one or two years, of pain with its attendant manifestations, we may feel certain of the existence of a tubercular bone centre, which gives rise to the repeated attacks, and which in all probability, amounting to a certainty, has begun its destructive process in the joint, and we ought to resort to operative measures. On the other hand, we may see cases, like case No. 4, where we can detect a destructive change in the joint, within a few months after the onset of the symptoms. In a large majority of hip-joint affections, we can recognize at a comparatively early date the articular destruction.

It is in a comparatively small percentage of cases where it is difficult to ascertain that the integrity of the joint is destroyed after the lapse of a certain period. Again, I can recall instances where the articular cartilage, in both the ascetabulum and the head of the bone had disappeared, where there existed a large peri-articular abscess, and yet the most careful examination, under chloroform, proved negative, and the only evidence which the surgeon had to guide him, was the length of time which had elapsed since the initial symptoms were noticed, the history of the affection, together with the subjective symptoms.

Having determined that we have to deal with an intra-articular bone lesion, with more or less obliteration of the articular surfaces, with abscess formation, the question arises, What procedure shall we adopt? On this question we meet with as much discrepancy of opinion as upon any one point in surgery. American surgeons, with Sayre and Taylor at their head, are the most conservative and advocate fixation or extension, with some portable apparatus, as the first principle, to relieve intra-articular pressure, and they are inclined to follow out this method through all stages of the disease.

Thomas and his followers contend that the joint should be completely immobilized and the patient not be allowed to walk upon the apparatus, but must use crutches, and he discards all sorts of extension apparatus.

Phelps, of New York, believes in complete immobilization of the joint with a complete body splint, confining the patient in bed, at the same time applying extension downwardly and laterally, in accordance with his theory, to produce extension in the direction of the long axis of the neck of the femur. A theory which may be correct, but I question if it can be carried out in practice. He claims that the destruction of the articular cartileges is brought about by the extreme pressure of the joint surfaces upon each other, owing to the spasmodic condition of the adductor and rotator muscles about the joint. One of my specimens (No. 4) would disprove this; we notice that the infectious secretions in the tubercular centre first undermined the articular cartilage, then perforated into the joint, the upper surface of the cartilage appearing smooth, while granulations appeared from below, proliferating upward toward the articular surface.

In opposition to this conservative school stand the German surgeons. Volkmann, Koenig, Heuter, Schede, Kocher and others, who believe in early resections and an eradication of the entire tubercular tissues, *i. e.*, as early as bone lesions and suppuration can be recognized, and it is this school which I follow.

I believe that as soon as we are convinced that conservative measures, after a reasonable trial, have accomplished little or nothing, or at best prolong suffering for an indefinite number of years, the earlier that we extirpate the tuberculous masses, the better do we subserve the happiness and welfare of the sufferer. Since we have a local tuberculosis to deal with, I can see no reason why we should any more hesitate to remove it than a tubercular process of the knee or of any other bone or joint.

It is true, the high rate of mortality in hip-joint resections formerly, was not at all encouraging to surgeons. Hunter quotes Leisring to have had a mortality of 63 per cent. Out of 176 resections there were 105 deaths. Of these 105 deaths, 24 equal to 22.8 per cent. were due to septicemia and pyemia; 23, equal to 21.8 per cent. to exhaustion; 12, equal to 11.5 to phthisis; 3, equal to 2.8 per cent. to diarrhœa; 8, equal to 7.5 per cent. to amyloid degeneration; 4, equal to 3.6 per cent. to progressive caries.

Jacobson collected 250 cases from the literature with 58.4 per cent. of deaths. He also collected 63 cases in the hospital of Copenhagen which were not operated upon, and found a mortality of 73 per cent. with 26.98 per cent. recoveries.

We must not forget however, that these resections of Leisring were carried out in the pre-antiseptic period and at a time when the exact nature of hip-joint arthritis was not so well understood as at the present day. Under the present method of wound treatment and the successful efforts in the direction of improved operative technic, together with a better understanding of the pathology of this class of cases, the statistics have been almost completely revolutionized, and to-day we approach the hip-joint with every assurance of obtaining union per primam.

There is no question in my mind but that the ideal operation in tuberculous hip-joint affections is, *to remove every particle ot the neoplasm, be it in the soft parts or be it in the bone.* The excellent results obtained by Volkmann are so encouraging, and the safety with which he operates leaves no question for dispute.

Barker has recently published his flattering results in a case of hip-joint resection (London *Lancet*) and he recommends a thorough removal of all diseased tissues.

Phelps recommends that "all abscesses should be incised, cutting them their entire length, scooping them out thoroughly and putting in drainage to the point of disease entering the joint, if the disease is to be found within the capsule, in fact, thoroughly washing, scooping and cleaning out the joint. A large number of abscesses are absorbed, but from the fact that one can never tell but simply give a lively guess as to which abscess will burrow and form sinuses leading to the consequences of pus absorbtions. I believe it is a better rule to operate upon every abscess, noting an occasional exception." I most heartily concur with this opinion. No operator has ever regretted operating too early, but many have had the conviction forced upon them, that to have operated earlier, they would have saved much suffering, yes, saved the lives of many of their subjects.

Volkmann says: "Every energetic local operative attack shows most excellent results, and they will obtain more general recognition. I repeat my oft expressed convictions, which are founded on a large number of sections in vivo, and on the examination of tissues taken from living subjects—Tuberculoris in the human being infects local parts with facility, but generalizes itself—contrary to evidence in animal inoculations—with difficulty."

If the opponents to operative measures will point out to us, which of these abscesses will be absorbed and which particular cases of bone lesion will recover, why then we will be only too happy to draw a line between the two class of cases and operate only on those which stand in danger of producing septisemia. On the other hand, what harm can there be in operative interference, providing we observe every antiseptic precaution.

When we have decided upon an operation, we will naturally inquire, Which of the several incisions is preferable? I have operated by each of the three favorite methods. First—

That of making a straight incision according to Heuter, Leucke and Schede, and also adopted by Barker and others, commencing in front of the thigh, half an inch below the anterior superior spine of the ilium and continue downward and a little inward for a distance of three inches. Second—The one usually made by Volkmann, beginning at the upper end of the trochanter major and continuing downward for three or four inches parallel with the long axis of the shaft of the femur. Third—The one proposed by Kocher, and the one which I prefer, because it exposes and gives better access to the joint than any line of incision with which I am acquainted. The incision is made parallel with the fibres of the gluteus maximus toward the point of the trochanter major, from this point downward along the long axis of the femur; the first part of this incision being 8 ctm long,the second part at least 6–8 ctm. The upper part of this incision passes through the gluteus max., lays bare the gluteus medius and minimus and the upper border of the pyriformis. As we follow the course of these muscles we easily recognize their attachment to the trochanter major; cutting through the thick fascia, over the trochanter, to the bone, we sever the attachments of the above named muscles; then passing downward the obturator internus and externus, gemelli superior and inferior, the quadratus and the vastus externus in front, are severed close to their attachments. We will notice that by this procedure we have avoided all the important nerve branches that supply these muscles. The only artery that has been cut is the external circumflex. The parts are now retracted. The thigh is flexed on the abdomen and adducted; we will find the joint before us after dissecting away the connective and adipose tissue. It is not difficult now to incise the posterior portion of the capsule, if it is still intact; the ligamentum teres can be easily severed, if not yet destroyed; if the thigh is strongly adducted and flexed and rotated inward, the cotyloid cavity can now be easily inspected and such portions of it removed as are necessary, with pincette and scissors or sharp spoon and chisel, or the head of the femur removed with a chain saw. After a thorough removal of the fungosities, the wound is thoroughly irrigated with an antiseptic solution, drained and satured, an antiseptic dressing is applied and the leg put on a Volkmann extension sliding apparatus.

SOME CASES OF PUERPERAL ECLAMPSIA.

By A. B. ANDERSON, M. D., Pawnee City.

I propose in this paper to relate a series of six cases of puerperal convulsions, representing several different phases of this very formidable disease.

Case I was complicated by valvular disease of the heart, with excessive œdema. Examination of urine showed no albumen. Patient was put upon eliminents. Basham's mixture fpr the kidneys and pot. bitart for the bowels. Digitalis was also prescribed for the heart lesion. No improvement followed. The lips became livid, showing deficient æration of the blood, the mind somewhat clouded, and while a consultation was being held as to the propriety of bringing on the labor, the patient had a seizure and was dead in three minutes. The heart was enlarged by dilatation, and most likely stopped in diastole.

Case II was seized with a convulsion while out in the yard, before any symptoms of labor had made their appearance; had a second attack soon after getting to bed before I reached her. Under chloroform she had, after these two spasms, an uninterrupted labor to the end, giving birth to a rather below the average female child. No albumen was found in the urine, and the patient made a good recovery. The treatment in this case was chloroform to finish the labor and pot. bromide with chloral hydrate for the first twelve hours thereafter.

Case III was seen in consultation and after the woman, a primipara, had been in convulsions all day. Chloroform and chloral hydrate with pot. bromide had been freely used to no avail. Hypodermatic injections of morphia and also full doses of verat viride were tried, but the convulsions continued in spite of everything done, death ensuing probably eighteen hours after delivery. This woman was a primipara and had been subject to paroxysms for several years, supposed to have been epilepsy. These paroxysms had continued during her entire pregnacy and became very frequent during the labor, which was not protracted nor severe.

Case IV was a primipara. Was called first after labor set in. There was some œdema about the feet and ankles, also of the face. Abdomen large and patient very clumsy in getting around for several weeks. Kidneys had acted scantily. Examination showed os dilating, position normal and everything promising a speedy delivery. The labor had been in progress perhaps an hour when, without warning, she went into a violent convulsion. Having chloroform at hand, administered it freely until the spasm was over. I then trusted it to a nurse, applied the forceps and delivered a fair-sized healthy female child. A slight spasm followed in a few minutes but was not repeated after the delivery of the placenta. This patient had albumen in the urine, as was found in the first specimen drawn after the attack, but soon disappeared. A long siege of puerperal fever followed in this case, the outbreak being apparently due to malaria.

Case V was a primipara; health good, kidneys acting well, no albumen. This was one of the few cases where a physician is called and given charge of a patient some weeks prior to the expected labor. I visited this patient about two weeks before her confinement and found everything in apparently favorable condition. Examination showed no albumen. The bowels were regular; patient cheerful and subject to no worry, until a day or two before labor set in, word was brought that her husband, who was a business man of Alma, Neb., had met with an accident by which his leg was broken. Although this news was made known to her in a manner not calculated to cause any sudden shock or alarm, more or less worry was of course the result. Labor came on at about 2 P. M., and I was summoned. Examination showed everything normal, os dilating, secretions abundant and patient cheerful. After a not very severe labor of about three hours, which she bore remarkably well, without any premonitory symptoms, a convulsion seized the patient. Having chloroform at hand, but not the forceps, administered the former, while I sent for the latter. Before they reached me, which was perhaps thirty minutes, she had another seizure. On the arrival of the forceps and a brother physician, who continued the anesthetic, I delivered her of a 10-pound male child, vigorous and all right. I immediately removed the placenta. A third convulsion followed in a few minutes. Chloroform was continued and gelseminum and ver. viride given by the mouth during the night. She made an uninterrupted recovery.

Case VI is more interesting as possessing some special features, being under observation longer and presenting serious complications. Was called to Mrs. M. in her eighth month of utero gestation and noted the following conditions: Multipara, age 41, youngest child 6 years, number children 6, number miscarriages 2, feet enormously swollen to the knees, pains in the limbs and head and in the stomach. Examination of urine showed large quantities of albumen, also hyaline casts. Ordered pot. acetate and digitalis for the kidneys, a laxative for the bowels, pepsine for the stomach and bromide and chloral for the headache. Also ordered the running of a sewing machine discontinued, which I found had been operated on frequently for several weeks. This was October 15. No particular change in the symptoms or treatment until the 21st, when the œdema began to disappear from the limbs, but showed itself in the face. Morphia relieved the headache and gastric pain better than anything tried; it also permits her to get some rest at night. The bowels are also kept open with pot. bi-tart and small doses of podophylin.

Oct. 27—Called in the morning. Patient had a good night's rest and is feeling comfortable. Œdema of face continues; there is also a sluggish condition of the mind. Urine one-half albumen; also casts abundant.

Oct. 30—Was called hurriedly at 12 M. and found her having labor pains. Gave 15 grs. each of chloral hydrate and pot. bromide and in two hours repeated the dose. A 3 P. M. the patient was easily delivered of a still-born eight month fœtus. Uterus contracted promptly and delivered the placenta at once.

Patient seemed to be in a semi-conscious state, which I thought might be partly due to action of sedative. At 4 P. M., one hour after delivery, observed the first actual evidence of convulsions, which involved only the eye balls. This was repeated at intervals of fifteen minutes, when a general convulsion ensued; partially controlled by the inhalation of chloroform. The convulsions continued and at 8 P. M. I gave morphia ¼ gr., atropia 1/60 gr. hypodermatically. The convulsions continued, but somewhat subdued by the injection. At 10 P. M. gave 15 grs. chloral and pot. bromide, and at 12 M. ¼ gr. of morphia sulphate with 1/150 gr. atropia. The first atropia had produced decided flushing of the face. After this used chloroform, as attacks were light and ceased altogether at 4 A. M.

Nov. 1—No return to consciousness, but no convulsions. Drew off one pint of coffee-colored urine, which on examination showed albumen one-half. Commenced pot. acetate with spirits mindereri again, which had been suspended during the previous night. The case is uneventful from this time until November 7th, patient regaining consciousness on the 3d. On the 7th she had a prolonged chill, followed by high temperature and profuse sweating. On the evening of the 7th she had a second chill, when the tem. was yet 102° and reached 104° in two hours. On the 8th a rigor, morning and evening, each followed by high temperature and sweating. Patient had large doses of quina, also tinc. ferri chlorid, as the case was evidently now septic. Lochia, however, was neither purulent nor offensive. On the 9th rigor repeated, as soon as reaction came on washed out the uterine cavity with warm water. In the evening found the tem. 102°. Again irrigated the uterine cavity, using spirits frumenti in the water. Morning of the 10th, tem. 100°, countenance brighter, patient feeling better. Irrigated the uterus, using listerine in the water, giving quinia and whisky.

11th—Tem. 100°, pulse 108. Patient literally covered with *hives*. There is still some œdema about the face and throbbing headache on moving the head about. Vision so imperfect that she cannot recognize her friends except by the voice. Irrigated the uterus.

12th—Tem. 101°. Has bleeding from the gums until very weak and bloodless. Checked it by the use of Monsel's solution; also gave ergot every three hours.

From this time the progress of the case, although very slow, continued. Vision was so imperfect that she could not tell a man from a horse after she was able to walk about the room. Ophthalmoscopic examination of the retina by Dr. Bullard, of DuBois, revealed only anæmia. This has gradually improved, but at the present time vision is very imperfect. I have related this case in full because it carries with it some important lessons, both as regards eclampsia and as regards puerperal fever.

Now in briefly reviewing the six cases of eclampsia, which I have but imperfectly and hastily outlined, do we not have a fair sample of eclampsia occurring in the puerperal state? No one has ever yet discovered a single and ever-present cause for this disease. According to Cazeaux, seven out of eight cases occur in primipara, but primipara is not necessary to its production. Albuminuria, if not a mere coincidence, plays only a small part in its causation.

Nervous irritability no doubt plays an important part as a predisposing cause. Unfortunate girls, left to bear their shame alone, furnish striking examples of nervous strain and mental worry. In looking, therefore, for the cause of puerperal eclampsia, we have not to search for one but *many* agents. In a small proportion of cases there exists diseases of the heart or kidneys, which act directly by bringing about the very state of things nearly always present in eclampsia, but which may be induced by altogether different causes. "Pressure upon and consequent irritation, peripheral stimulation of the sympathetic nerves of the abdominal viscera," coupled with defective elimination, bad sewerage as we may term it, added to these conditions nervous irritability and mental worry of the pregnant woman, give us the main factors in the etiology of puerperal eclampsia. All of these conditions exist to a greater extent in first pregnacies than in multiparous women.

As to the cases recited: No. I, the primary cause was the heart lesion. This led to all of the abnormal steps that followed, namely, defective renal secretions, œdema, pressure upon the abdominal viscera, uremia, dilatation of the heart, increasing thereby the valvular insufficiency, the accumulation of carbonic acid in the blood, the climax being a convulsion and death from a weakened and overworked heart.

Case No. II presents to us one of those unaccountable cases, third pregnancy, patient feeling well, and kidneys and bowels normal, no mental anxiety, child in utero normal, no unusual distention by large quantities of liquor amnii, but the patient has two convulsions, and then a normal labor and a good getting up.

Case No. III presents to our minds the influence of former condition of the nervous system. An epileptic of several years duration, fits increased by pregnacy, and becoming heroic during labor, terminating fatally. In this case the child lived.

Case No. IV is a typical one of eclampsia due to pressure and defective elimination, bowels constipated, skin inactive, renal secretions diminished, abdomen much distended by large child and abundant waters.

Case No. V presents none of these factors, except the mental worry. Every physician knows something of the worry experienced by a woman pregnant for the first time. Add to this, separation from a husband suffering from the result of a serious accident, and I think you have the clue to the cause of convulsions in my fifth case.

In case No. VI we recognize chronic Bright's disease, which exists at this date, six months after the termination of the pregnacy. Uremia was present to a marked degree, producing cephalalgia, defective vision, and finally complete amaurosis, hebetude, stupor and convulsions.

In none of my cases have convulsions occurred in prolonged or difficult labors. As to treatment, it must necessarily vary since the causes and condition of the eclamptic patients differ so widely. But for the majority of cases there is nothing equal to hypodermatic injections of morphia and atropia. Chloroform of course is indespensible in controlling the paroxysms. Pot. bromide and chloral hydrate are good adjuvants. Bleeding may be the *sine qua non* in a few cases. The treatment of puerperal eclampsia is the prevention treatment. There are but very few cases but that could be carried safely through if the physician was called and recognized the conditions a few weeks prior to labor or prior to the attack. The greatest fatality is found among that class of cases subject to eclamptic habits.

REPORT ON PROGRESS IN OBSTETRICS.

By Chas. Inches, M. D., Scribner, Neb.

The report on progress in obstetrics is a brief presentment. I appreciate the labors of those who have preceeded in this position, and my own general remissness, which allows me to act the part only by reason of some sharp words from our worthy secretary a fortnight ago.

While, however, I plead unceasing cares in extenuation of so much at least in a report on progress, as is a mere summary and recital to you of the words and work of great men—that which custom has too often shaped our reports into in all sections—I wish to add that the highest good—the highest interest surely—is not attained thereby; and until the former, somewhat visionary, squares with the latter, so easy of demonstration, I believe the furtherance of science in our art, while meeting but a few hours yearly, will best be subserved in evoking a paramount interest in each and every proceeding of our reunion.

There are gynecologists here—savants, indeed, in many specialties to the depths of orthodox medical science—but I take it we are well nigh all accouchers. And is the general practitioner in Nebraska, with this branch of his art a constant toil and care, one whit beneath the high calling of the medical profession of this day and generation? I trow not. It is his. The questions of the hour, the practical needs of humanity, confront and engross his thought in spite of all other influence. And yet—paradoxical is it? —the depths of orthodox medical science have not always an absorbing interest for him. Well, in this, as in many another application of the word, so much the worse for orthodox; the Doc's are all right.

LADIES AND GENTLEMEN: You have your medical literature. Progress in any branch you can barely escape noting—for this literature is a most voluminous one. The original article is there, perchance suggestive, brilliant, captivating—perchance oftentimes ponderous, and rather a suggestion of retrograde metamorphosis. At least you have full report of the transactions of the world's best medical societies, and a very refinement in the way of editorial comment thereon. In a word, the summary and epitome of progress is yours. Why, then, these everlasting reports on Progress? And why stand I here?

Well, on this particular occasion, to briefly make a few anamadversions on some prominent features of the year's work. The subject of Antiseptics has probably received the more extended notice; so much so, and too often, with such illogical conclusion that I imagine you would pardon me to pass it entirely. But in this very matter I propose not to.

Sepsis in the puerpera has during the year engaged the attention of the London Obstetrical Society, the International Medical Congress, the American Medical Association, the Society of American Obstetricians, as well as very prominent societies in New York and elsewhere in this country. The extremes of opinion have been presented. Is it not illogical that in one sentence the neglect of certain antiseptic procedures should be put forth as criminal before every judicial court, and yet in another, of quite as high rank, that the use of antiseptics in private practice had been largely given up? A very good editorial comment thereon is that "the fixation of legal responsibility upon a midwife or physician will for a long time be a difficult thing to do." Probably so, in a higher court; but there are many courts of law in this country, and assuredly the court of public opinion—the quondam *vox dei.* And with these dogmatic utterances floating about, taken up and refulminated by medical men from one motive or another, how keenly may it touch the man who would dare to follow the dictates of his reason, where even reason has all the environment for equipose that human intellect will grant. In one sentence we read that there is no excuse for puerperal fever; in still another that there are no antiseptic measures which, under all conditions, can be relied on as prophylactic. One will inject a uterus with a sublimate solution of a grain in two ounces; another will damn sublimate, that it has killed more than it has cured. One will give detail of rummaging about the genetalia immediately after birth of child, claiming that in each case the pelvic contour is as well known as is that of the patient's face; while another (and no less than Lusk of Bellevue) says he has not put his hands within the vagina for years. One (in the paper read on puerperal fever before the last International Congress) that, from the first day until convalescence, the *uterine* cavity, as well as the vagina, should be daily washed out with water as hot as can be tolerated; while Credi and Fehling state that both *vaginal* and uterine irrigation are attended with dangers, and should not be done in the puerperal state except for very definite indications.

Herein is a multitude of diversity, and the transactions of the year are full of it. And what will we conclude? Considerably more, if wise, than the mere tuquoque sort of comment on this uterine drenching and rummaging—that it is barbarous. The promulgators of these declarations are prominent in their profession. You may have a tilt with them, if you can approach their high vantage of position and scientific attainment. But, cui bono?—for you must needs come within the lines of fashionable, scientific ways, and there is unfortunately a gap between the estate of notoriety and that of the every-day physician. Dr. Loomis, in his address at the Academy, draws nigh to this when he says: "Experimental work will ever be one-sided; the whole number of causes can only be appreciated at the bedside."

Yes, turn away from the armament of chemical agents and scientific procedure presently dwelt upon, and "at the bedside of humanity, with our work resting on the plane of biology, recognize all that is factor in human destiny." But enough of this.

I recognize the wonderful achievement accomplished through antiseptics in controlling and well nigh banishing the virulent forms of puerperal fever. I made witness to this some years ago in narrating to this society an experience; claiming for the bi-chloride of mercury, in speedy and thorough vaginal irrigation, a most happy possession. It is only when science has made a fetich of antiseptics that I dissent; and well might Dr. Shrady ask his confreres "if the temple which had been built was founded upon a rock."

I glean, ladies and gentlemen, in the year's work, that the concession is generally allowed; that puerperal fever is septicemia; that ordinary surgical fever is analagous, its bacilli being capable of producing all the conditions met with in puerperal fever; that the theory of puerperal fever being a specific disease is no longer tenable; that puerperal fever is complex, and dependent on a variety of causations—the difference in the virulence and nature of the micro-organisms, and the resistance of the individual and surrounding conditions—explaining the difference in severity; that the healthy puerpera is aseptic, despite the presence of micro-organisms, which are always found in the vagina and cervical canal, but not in the cavity of the uterus; that these micro-organisms are fanned into a pernicious activity by various degrees of putrescible matter and necrotic tissue; that in the great majority of severe cases, those heretofore spoken of as the purely septic forms, the disease is communicated from without, and generally by infection from the attendant; that, as a routine measure, the attendant should observe scrupulous cleanliness, particularly in the scrubbing of finger nails, and should practice disinfection at least to the extent of bathing the hands in a 1-2000 sublimate solution; that in all varieties of puerperal fever the vaginal douche is agreeable and highly beneficial; that a rise in temperature does not indicate a resort to uterine irrigation—a flabby uterus, with retained decomposition, being the true indication; that thirty minutes is a reasonable time to await the expulsion of the placenta; that the uterus can be made to contract in ten or fifteen minutes under a reasonable friction and compression; that the fingers and hand even, introduced intelligently, will do no harm; that the careful removal of all secundines is imperative; that a lacerated cervix had better be let alone; that these simple measures, with the avoidance of unnecessary handling, and cleanliness first, last, and all the time, are not followed with septic fever.

And I specify these few points only as bearing on that part of a routine which has relation to sepsis, and on which a dubitable mind may have reasonably existed. This must not be misunderstood. I say that I glean such to be the case. An opinion after all; but simply and briefly stated. Years ago, if given the opportunity, I would have held to such and such more positively—and amplified the same *ad nauseam*. The amplification is yours now for the reading, and probably if we had time it would be for many here to express. But if it could come to an end, some one, with possibly as much experience and knowledge as the rest, would advise, as was the case in the best discussion reported for the year—"that all things considered, the system had better be placed on the defensive, that there might be no impugnment of deeds, even though faith be absent." I have every faith in the simple etiology and procedure herein stated. A knowledge of the power and usefulness of antiseptics in the manifold conditions possible in the puerpera is an entirely different matter. Here only, to clear the field in a general way, where the accoucheur finds difficulty in assimilating the wonders of his art, in this matter of antiseptics, put forth for his every movement. One of the many schedules of the year touching this, hails from Chicago; and the author fortifies its acceptance by stating that it can be carried out in South Halstead street as well as Calumet Avenue. I do not know the localities; but methinks there is something of the Dives and Lazarus in this. Probably we have very little of the South Halstead in Nebraska; but no matter—the perfection of our art is more in the kindly word and kindly touch; and these may go anywhere, for they are well nigh divine. "Intelligent" introduction of fingers and hand; "careful" removal; "unnecessary" handling. Are these meaningless terms to us? I wonder how they set about in their polyclinics and post-graduate courses to bestow the gift of touch, which the man has become erudite in possession of, through waste of his physical being in many a weary hour and trying experience. Explain the rationale of the Dublin method, that of Credi and of Schultze; and descant profoundly on the physiology of placental separation and expulsion, if you will—without on the one hand directing that the uterus be squeezed in the hand like a sponge, and on the other waiting, waiting, waiting. Why, an essay was put forth in the the course of the year, where absolute direction was given in each and every confinement, to remove the placenta by passing up the right hand, detaching and bringing it out; then to re-introduce the hand and remove the still adherent membranes, rubbing the velvety place of placental insertion, in order to prevent any undue fibrous occlusion of the veins. And when brought to task the writer gave a profound dissertation on what constitutes logical conclusions—chief of which were a very large practice, no bad result and public esteem.

Yes, there is a gap between notoriety and the fibre of the high calling of the true physician. "Free heartedness, and graciousness, and the sight of the peace of others, and the ministry to their pain; these and the blue skies above, and the sweet waters and flowers beneath, and mysteries and presences innumerable; these may be our riches untormenting and divine, seviceable for the life that now is, and it may be with promise of that which is to come."

Here I should stop. It was my purpose when commencing this brief paper to touch upon a few other matters, but your interest would flag. I will merely say of electro-therapeutics that, while it will receive more attention in the report on gynæcology, I notice during the year that Lawson Tait has said of it, perhaps with special reference to extra-uterine fœtation, that its practice is rampant quackery, while per contra it was noted that no one who had witnessed the effect of faradization with a small pocket battery, in the cases of an asphyxiated babe, and of post-partum hemorrhage, would decry electricity. Its use, however, in cases of this kind is exceedingly rare with us.

Not a word comes from the profession against the use of anæsthetics in labor; and chloroform is the choice almost exclusively. Whether fashion will carry its use beyond proper bounds is a question. I have found a goodly sized bottle of it in several cases as a part of the toilet.

Antypyrine appears to be generally discountenanced. Pilocarpine ditto.

Fœticide has received attention from many quarters, but chiefly by reason of a somewhat sensational crusade on the part of a leading daily paper. Before this, however, at the meeting of the International Medical Congress, at Washington, a British delegate made remark: "As a profession we discountenance fœticide; but is that enough? I believe we have reached a crisis in the history of medicine, when it has become necessary to speak out and declare our faith." It is far from my wish, in reverting to this, to provoke discussion at this session. Such could only be desultory. The subject touches the whole fabric of our social make-up, and, probably, in some fundamental features must receive attention from beyond the medical profession. Yet we are looked upon in the state as functionaries of the highest art, and invested with the welfare and happiness of the human race. An intelligent minority calls upon us to state our limitations. On this, also, a high medical opinion says: "Enlightened society has become one vast interrogation point." It is the physician alone who can lift to a higher level public ideals of life, death and disease. "When man rises by medical instruction to the momentous cognition that he has power over his own destiny and that of his offspring, life for the masses will be truly worth living."

REPORT OF PROGRESS IN GYNÆCOLOGY

By E. M. Whitten, M. D., Nebraska City.

In reviewing the progress in this interesting department of medical science, I shall confine my remarks chiefly to what I consider practical, or to that which I believe will be most beneficial to the practicing physician. In a society like this, where so much must be crowded into a short space of time, tedious reviews and laborious technics are impractical—hence I will not attempt a complete review of the past year.

In the treatment of endometritis there is a decided tendency on the part of certain eminent gynæcologists to dispense with local treatment, and an equal determination on the part of others quite as distinguished to insist on its necessity, each offering measures claimed to be efficient, which seem to be diametrically opposed to each other. The weight of evidence in each method seems to depend upon its individual advocate. Dr. Emmett opposes applications to the uterine cavity, claiming that the changes in the endometrium are the result of pathological changes outside the uterus, and for this reason, to be rational, measures must be directed to relieve the cause of the affection rather than to the resultant effect of such cause. Hence no intra-uterine applications are recommended, except to destroy new growths or vegetations within the uterus or to arrest hemorrhage, and he strongly affirms that patients thus treated are restored to health in much less time than where intra-uterine treatment be resorted to. He states he succeeds admirably in checking congestions, and hence relieving the hyper-secretions from the endometrium.

Doleris and Munde continue to oppose these views and methods. The former curetts the uterus, brushes out the cavity with a 1.6 solution of carbolic acid, and then irrigates with a 1.25 solution of the same or with a 1.2000 per-chloride of mercury solution. He claims that this method is superior to all others and never needs to be repeated but a few times.

Munde continues intra-uterine medication. Removes vegetations with the curette, and does not consider it safe to direct exclusive attention to vaginal medication, and the relief of uterine and pelvic congestion.

Engelman stands strongly in favor of dry medication, by means of the cotton tampon. He does not entirely reject intra-uterine medication, but he favors mild agents, if used at all, but advocates the same methods Munde recommends, the hot douche and glycerine tampon to relieve pelvic congestion, thus equalizing the peri-uterine circulation and thus reducing the hyperæmin of the endometrium.

Valliet and Landan recommend extra dilatation before intra-uterine medication. The cauterization of the endometrium by means of electro-chemical action has been highly recommended. This method, though so highly extolled during the past year, should not be attempted by the ordinary practicing physician.

In parametritis Dr. Hardon is strongly recommending the use of the aspirator as a means of getting rid of the effused serum before it becomes organized. The needle is introduced into the infiltrated tissue and the fluid drawn off at various points until the tissues are freed from the effusion. In addition to this procedure he uses the hot douche of Emmet. Apostoli uses electricity in all stages of the affection, and claims it is safer and more speedy in its effects than any other method.

Massage is also being highly recommended in chronic forms of this disease, to break up adhesions and promote absorption, thus improving the pelvic circulation. The use of hydrastis canadensis is receiving much attention in the treatment of uterine hemorrhage, the highest authority testifying to its value. It is given in F. ext. in xx minim doses, every three or four hours. And especially is the attention of the profession called to the efficiency of quinine in hemorrhagia in malarial districts.

In the discussions upon dysmenorrhœa, Dr. Emmet believes it largely of nervous origin, and predicts a revolution in its treatment. He believes the pain neuralgic in most or all anæmic patients. Others claim in most cases it arises from stenosis, while others contend for inflammatory conditions of the endometrium. Thus these are advocates of, chiefly directing attention to the building up of the constitution, while others recommend dilatation of the cervix, and still others who contend for intra-uterine medication.

I believe *most* cases of dysmenorrhœa arise from an anaemic neuralgic state as many women have stenosis and other affections without this affection. In the treatment of dysmenorrhœa, dependent upon stenosis, electricity has been much used during the past year and with very satisfactory results, and is destined, in my opinion, to supersede the older methods of dilatation and use of the knife.

A word on the treatment of fibroids. Keith in speaking of Apostoli's method of treating fibroids says: "It is criminal to perform a major operation for fibroids of the uterus before trying Apostoli's, of treating them by galvanism. He attributes the absorption principally to the virtues of the negative pole. According to Apostoli's theory the tumor should not be removed by actual destruction of tissue, but by absorption, the resultant effect of a negative current. The capsule is finally ruptured and the tumor passes into the uterine cavity, from which it is expelled. He accounts for this effect in this way: The uterine tissue being acted upon acts upon the neoplasm within, and the fibrous tissue of the tumor failing to act, or contract, is expelled, following the line of least resistance moves toward the endometrium, whose thickened condition is diminished from successive treatments. The expulsion of the tumor is preceded by blood clots, the result of the rupture of its capsule.

In the treatment of displacements I will simply call your attention to Alexander's operation for shortening the round ligaments.

This operation was made known to the profession by Wm. Alexander, of Liverpool, England, in 1882, upwards of six years ago, and at the beginning of the present year more than three hundred have been performed--most with satisfactory results. Notwithstanding these flattering reports from its votaries, there has been much adverse criticism from high authority. Those convinced of its utility attribute this to the prejudices with which new operative measures are received and recognized by the profession. It was objected to on the ground that the sound ligaments were not so much at fault in uterine displacements as the sacro-uterine ligaments—hence it was argued that the measure was unscientific; but Dr. H. T. Byford states that this objection is untenable from the fact that in retroversions, when we draw the fundus forward, we restore the normal uterine axis, relieving abnormal abdominal pressure though the organ may be a trifle anterior to its natural location—thus giving opportunity for the sacro-uterine ligaments to retract and regain their function of support.

Later objections to the operation are: The difficulty in *finding* the round ligaments after cutting down upon them, the *possibility* of *breaking* them, or their absence, danger of peritonitis from opening Nuck's canal, and the severity of the pain following the operation.

Of these objections, Dr. Doleris says: They have no importance as objections, and further states, that he at first opposed the procedure, but that experience had changed his views, and that he now advocates it, considering there is neither serious difficulty in its performance, nor grave results liable to follow it.

Dr. Alexander, after performing eighty operations, believes it the anatomical cure for retroversions and retroflexions.

Prof. Byford agrees with this conclusion.

Dr. Kellog favors Alexander's operation for anteflexions, combined with retroversion, especially when complicated with prolapse of the ovaries. He also recommends it in some cases of uncomplicated anteversion. Twenty cases are recorded where he operated for prolapsed ovaries, and the organs were restored to the normal position, there not being a single failure.

Of the technics of this operation you will learn elsewhere. This is no place to dwell upon them, further than to say: The primary incision being begun just above the spine of the pubes, is extended one and one-half inches upward and outward parallel to Poupart's ligament. Munde makes this incision at one sweep of the knife down to the canal, and picks up the muscular and fibrous tissue surrounding the cord en masse with the forceps, and thus shortens the ligaments. Others dissect carefully down, isolating the cord-like ligaments, which are drawn upon until the uterus is anteverted, and then the ligaments stitched to the side of the canal by the silkworm suture, passing the stitch through the pillar of the canal, then into the ligament along its longitudinal fibres and returning the needle through the pillar of the same side. The canal is then closed by sutures of the same material, including a small portion of the cord being drawn only sufficiently tight to approximate the edges. The wound is now closed, care being taken to promote drainage by a tube and iodoform wicking or by insertion of iodoform gauze. Strict antisepsis is observed, and the dressing not removed until the fifth day, when the wound should be redressed. The patient should lie in bed for four weeks, and not be allowed severe physical exertion for five months.

The operation of hysterorrhaphy, as recommended by Kelly, for retroversion and prolapse, has also received much attention during the past year. By this method the fundus of the uterus is brought forward and attached to the abdominal walls by suspensory sutures, passed through the cornua by several interrupted or continuous sutures being passed through each, and attached to the sides of the incision at points a little more than half the transverse breadth of the uterine body from the sides of the incision. Kelly believes that hysterorrhaphy possesses great advantages over Alexander's operation in correcting prolapsed conditions. Thus the discussion goes on.

The stem pessary of Donaldson is receiving flattering commendation in the treatment of displacements by some leading gynecologists, and sharply condemned by others. But this method of treatment is too old and too familiar to all to need discussion here today.

In reviewing the methods of removing the uterus, that by vaginal hysterectomy, where the appendages are not involved, is to be preferred, rather than by abdominal section, since by the former method the mortality has been greatly reduced; but there seems to be a growing tendency among gynecologists that it should not be dignified as a legitimate operation, and especially so where the uterine appendages are involved in malignant disease.

In the treatment of ovarian diseases and of those affections that call for laparotomy, there is little new. Lawson Tait has made his second thousand laparotomies of unselected cases with a still reduced mortality report. In fact, gentlemen, the march of medical science never was advancing as at the present day.

Just a few remarks upon the practical excellencies of the muriate of cocaine in the minor operations in gynæcology, and I close. It fills a place we have all wished a remedy to fill. It is a boon in the treatment of affections of the vulva and urethra and bladder. In acute inflammations of the urethra, the intense pain caused by the introduction of the catheter is prevented, by first introducing cocaine in suppositories or capsules. The capsule, being filled with a saturated solution, is introduced after dipping it in hot water. Its action is almost immediate, and the catheter is introduced without pain. If irrigation is desired and there is vesical hyperæsthesia after the urine has been drawn, two drachms of an eight per cent. solution may be injected into the bladder, and it medicated without pain, where formerly this procedure has been almost intolerable, when no preliminary measures were used.

If the urethra is to be dilated these preliminary means give immunity from pain. It saves time and is much pleasanter for the patient than a general anæsthetic.

It takes a place long needed in irritable caruncle or in accidental irritations and inflammations of the meatus, causing hyperæsthesia of the parts, vaginal ulcers, and the like, that no other remedy has; and now these parts may be treated with caustics, even without pain, and with little after discomfort to the patient, and with a satisfaction to the physician hitherto unknown. How many of us have shrunk from applying needed remedies in these cases because we feared the shock it might give to some delicate and enfeebled female! Now this want is filled in the muriate of cocaine. For vaginismus simply apply a ten per cent. solution to the vulva on absorbent cotton, and the parts may be dilated and inflamed points cauterized with little or no pain. In slight lacerations of the perineum, if cocaine be applied in like manner, sutures may be introduced and the operation for repair is painless.

EXCISION OF THE NECK

AND CONDYLE OF THE RIGHT INFERIOR MAXILLA FOR ANCHYLOSIS OF THE TEMPORO-MAXILLARY ARTICULATION.

By C. P. Harrigan, M. D., Omaha.

The rarity of this operation necessarily limits the literature upon this subject. Erichsen, Bryant and Gross are among the authors whom I have reviewed, who have in any manner gone into details descriptive of an operation.

I deem it unnecessary to go into the ideas and outlines of the operation as prescribed by these eminent men, for either Bryant, Erichsen or Gross is to be found upon the library shelves of every member of this organization. Hence, I will proceed at once to give the history of the following unique case:

On April 10, 1889, I was consulted by the parents of H. F., boy, age eight years, for relief for an anchylosed condition of the lower jaw, which, at this time, had existed some fourteen months.

During the month of August, 1887, the boy was kicked by a horse on the symphisis of the lower jaw, producing a cut about an inch and a half in length. The neighboring doctor was called in, who sewed up the wound, tied a bandage around the boy's head, and told the parents the child would recover all right as there was no fracture of the bone. The wound healed nicely, the stitches were removed on the fourth day, and the child went about his play as usual.

He would, however, occasionally complain about the upper portion of his lower jaw causing pain, but the mother paid no particular attention to his complaints. About three months after the receipt of the injury, the mother noticed that he did not open his jaws as wide as formally, and this condition gradually grew worse until there was complete abolition of the movements of the lower jaw, which projected forward and to the right, so as to leave an interspace between the two jaws of sufficient width to admit the tip of my little finger.

Upon examination of the inferior maxillary, I found a large callus filling up the space between the neck of the bone and zygoma upon the right side of the face. On April 17, assisted by Dr. George B. Ayres, I placed the boy under the anæsthetic effect of chloroform, and endeavored by forcible extension to separate the jaws, but without success. I was unable to use the screw-gag on account of the looseness of the teeth. The patient was allowed to come from under the influence of the anæsthetic.

I now advised the parents to have the child subjected to the operation for excision of the neck and condyle of the right inferior maxilla as the only measure which could possibly restore the functions of the lower jaw. To this they finally gave their consent.

On April 26 the boy was again placed under the influence of chloroform, and I proceeded to do an excision of the condyle and neck of the right inferior maxilla. I did not follow the T shaped incision as laid down by most authors who describe this operation, but began a vertical incision just anterior to the root of the zygoma, carrying my incision down along the lower margin of the ramus to a line drawn from the lobe of the ear to a point midway between the nose and mouth; this line being the land-mark of the Parotid-duct as laid down by Gray.

The transverse facial artery was necessarily cut in this incision, which was seized by a forceps and ligated with cat-gut ligature. This incision exposed an osseous bridge extending from the neck and condyle up and attached to the zygoma, establishing beyond doubt the receipt of a fracture obliquely through the neck and condyle, being undoubtedly caused by the kick of the horse upon the symphisis of the maxillary some twenty months previous to the date of the operation.

An incision was now made through the periosteum, beginning as high on the condyloid portion of the neck as my field would permit, carrying it down to that portion of the neck below the base of the new formation of bone, then by means of a small periosteal elevation I removed as much of the periosteum as possible, all the time keeping the point of the elevator close to the bone so as to avoid injuring the internal maxillary artery and the seventh pair of nerves.

Two small retractors were placed in position and the edges of the wound separated.

Then by means of a small chisel and mallet I removed the bony bridge extending from the seat of fracture to the zygoma. The chisel was now placed below the callus on the neck of the bone, a few vigorous yet guarded blows of the mallet sent the chisel through the bone, separating the neck and condyle from the ramus proper.

I now found upon examination an anchylosed condition between the head of the condyle and the glenoid fossa, being caused by the callus of bone thrown around the seat of fracture through the condyle. The chisel and mallet were again brought into use and the condyle was tediously removed in sections, without any injury to the seventh pair of nerves, the temporal and internal maxillary arteries, the three important structures which occupy dangerous positions in the field of this operation.

After the removal of the neck and condyle, I made use of slight forcible extension upon the lower jaw, and its normal movements were readily produced. The transverse-facial artery was ligated after the first incision, the remaining bleeding vessels, which were small, were very easily checked by means of torsion and pressure. The wound was thoroughly irrigated with a solution of bi-chlorid of mercury, 1 to 2,000. The wound was now dusted with iodoform. Three deep and three superficial silk sutures closed the wound, with the exception of the lower corner which was left open for the introduction of a small rubber drainage tube.

A large layer of iodoform cotton was placed over and in immediate contact with the wound; over this was placed a layer of bi-chlorid gauze, another layer of iodoform cotton, then a final layer of bi-chlorid gauze; a head bandage was applied, the anaesthetic was withdrawn and the patient recovered from its effects without any mishaps.

On April 27th, 10 a. m., the day following the operation, the thermometer registered 102.5° F., pulse 120 full and bounding. Administered four grains of phenacetine. At 4 p. m. temperature had fallen to 100° F., with a proportional decrease of the heart pulsations.

April 28th, 10 a. m., temperature 99 2° F., pulse 96. At 4 p. m., temperature 99.6° F., pulse 96. April 29th, 10 a. m., temperature 98.5° F., pulse 96; 4 p. m., temperature 98.2° F., pulse 98.

April 30th, the fourth day after the operation, I removed the dressings; the wound had united by first intention; no evidence of puss on the dressings; three of the sutures were removed and the drainage tube withdrawn; the wound irrigated with a bi-chlorid of mercury solution, 1 to 5,000. The drainage tube was shortened about an eighth of an inch and reintroduced. Two layers each of iodoform cotton and bi-chlorid gauze completed the dressing.

The dressing was not again disturbed until May 3d, the seventh day after the operation; the remaining three sutures were removed; the drainage tube withdrawn, no evidence of puss. Used 1 to 5000 bi-chlorid mercury in washing out the sinus left by the drainage tube. Iodoform was blown along the tract left by the tube; the toilet was completed with dressings of iodoform cotton and bi-chlorid gauze.

On May 15th, eighteen days after the operation, the dressings were again removed. The sinus and aperture left by the drainage tube had filled with healthy granulations.

This aperture I covered with a small piece of isinglass court plaster and discontinued any further dressings. At this date the boy can make sufficient use of the jaw to eat anything set before him on the table.

The following are the unique features of this case:

First—The fracture extending obliquely through the neck and condyle of the right inferior maxilla and caused by indirect violence.

Second—That the displacement of the fragments was so slight as not to interfere with acts of mastication.

Third—That the patient did not complain of enough pain to excite the interest of his parents as to its probable cause.

Fourth—That there should be such a large amount of callus thrown around the seat of fracture, which never fully interfered with the functions of the jaw until twenty months after the receipt of the injury, when a complete anchylosed condition of the temporo-maxillary articulation moved the parents of the child to seek relief for this condition.

Every third day I used forcible extension to prevent any fibrinous or plastic material from producing a new anchylosis.

The patient has never complained of pain only upon my using forcible extension. He has every movement of the lower jaw fully established, and I feel sanguine that nature will establish a pseudo-cartilaginous joint, which will enable the inferior maxilla to perform its functions in a satisfactory manner.

A CASE OF ATRESIA HYMENALIS WITH MENSTRUAL RETENTION.

By E. A. Benton, M. D., Central City, Neb.

Miss M., thirteen and a half years old, was brought to me for treatment December 10, 1888, having the following appearance and history: Large, strong built and well advanced in womanly development for her age; complexion rather sallow, with a tired careworn expression of face. Said she had for the past year, pain in back and lower part of bowels, which became worse once in four or six weeks. These bad spells lasted five or six days, and made her so sick she could not go to school and frequently had to remain in bed for several days; had some trouble with movements of bowels and urination. There was considerable swelling in the lower part of her bowels at these times, and she thought some enlargement had remained all the time. The last few months there had been such a constant enlargement that she thought there must be a tumor or something of that kind. There had never been any discharge of any kind from vagina. She applied to Dr. W. for treatment last March, and had been taking medicine to bring on monthly turns ever since, but was getting worse all the time.

Examination revealed abdominal tumor reaching nearly to umbilicus, elongated and round with lateral mobility. On the summit of the tumor the uterus, slightly enlarged, could be distinguished. The external genitals were well developed and somewhat distended by a tough, thickened, imperforated hymen. Fluctuation was very distinct between abdominal tumor and hymeneal membrane.

The next day, at her home, after applying muriate cocaine, I, with scissors made the usual crucial incision of hymen. Forty-eight ounces of thick. dark, odorless blood was discharged. After it had nearly stopped discharging I washed out the vagina with warm water, previously boiled, and thoroughly dilated the opening in hymeneal membrane with fingers. I repeated the washing and dilatation on second day, and found the opening in hymeneal flaps quite free. There was considerable eccentric hypertrophy of vaginal walls with but little change in uterus from normal. She was kept in bed five days, after which she resumed her usual duties without even feeling any discomfort from the operation, or any trouble at menstrual times, which have been regular, and her general health good to the present time.

I present this case to the Nebraska State Medical Society for the reason that I consider it a typical and uncomplicated case of its kind, and not that any high degree of diagnostic acumen or great amount of surgical skill was required in the case; still it may put the members of this society on their guard so that no one, through carelessness, may make such a mistake as was made in this case before it came to me. She had received treatment ten months from Dr. W., without his having the slightest idea of the real cause of the non appearance of her menses; at least he never gave her or her parents any hint of the cause of her trouble, but kept giving her emmenagogues until she would take no more, and even then he made no effort to get at the real cause of her trouble.

From records by authors that I have had the pleasure of examining, I find that such cases are much more uncommon than I had supposed. I had thought that the fact of this being my first case in an active practice of twenty-three years, was so by chance, and not from any particular spareness of cases. I conclude they are not very common, since such eminent persons as F. Winchell, M. D., professor of obstetrics and gynæcology at the Royal University, Munich, has seen only five cases, and our Prof. Emmet has seen but four cases, while some other eminent gynæcologists have never seen a case.

REPORT OF TWO CASES FROM PRACTICE.

CASE A—VAGINITIS IN A CHILD. CASE B—MEMBRANOUS DYSMENORRHŒA.

By MARY RYERSON BUTIN, M. D., Dorchester.

In presenting these cases, I believe them to be of infrequent occurrence, and wish to obtain an expression of opinion and advice.

Case A—Child, aged four years, came to me August 27, 1888, accompanied by her mother, who stated that six months prior to that date the little girl had first had discharge from vagina. She had been treated in her former home, but without benefit. Besides the discharges, she had had intense itching of vulva, and vesical irritation, and enlarged glands in the groin, though there were none at the time. The mother stated that she believed the cause to have been contagion—that the father had gonorrhœa, and through malice had infected the little girl.

I placed the child in a favorable position and light, and on inspection found the external genitals bathed in a profuse greenish purulent discharge. The vulva was much congested, and between the folds of the carunculæ myrtiformes and labia minora were several bright red erosions. On the left buttock, an inch and a half from the vaginal orifice, was situated a wart of perhaps a fourth of an inch in length. It led me to believe the disease specific, and to pronounce a mental anathema upon the inhuman parent if such was the source of infection. By the aid of an improvised speculum (Toynbee's ear speculum) the interior of vagina was examined. The mucous membrane was very much congested, and very painful. The anterior wall was cyanosed and just within the introitus vaginæ posteriorly were situated two more erosions of bright red appearance. The upper part of the canal partook of the congestion, but not to the same extent. Thus I found the case to be vaginitis and vulvitis, which was or was not specific in origin. I did not examine the discharge microscopically, as then it would even have been difficult to have told whether it was gonorrhœal.

Parkhurst, in the International Encyclopedia of Surgery, says: "At one time it was supposed that the discovery of trichomonads, leptothrix or a vibrio would decide whether it was venereal or not. But this has been given up."

Thus, however strong our suspicions may be in a case of this kind, we must not give them utterance. In my treatment I employed no new agents, but there were two points to which I would especially call your attention—namely, *rest* and *depletion*. I employed the douche with a solution of zinc sulphate daily, with the occasional painting with silver nitrate, and attempted to keep the parts separated and dry by absorbant lint. But the activity of the child prevented carrying out any such measures. At the end of one month the discharge had ceased, and I nipped off the wart and cauterized its base. But the vulva had not improved—in fact a bluish discoloration of portions of it and the prominence to the eye and touch of the sebaceous glands pointed to its chronicity. I insisted upon absolute rest in the horizontal position and added, besides the silver solution, a dusting powder of zinc oxide and starch. In a little less than one week the erosions were perfectly healed. As leeches were unattainable, and remembering the depletory action of glycerine, I applied it on alternate days to the whole mucous membrane of the vulva. It produced considerable smarting at first, but each application was followed by the action characteristic of the remedy. During the intervals the dusting powder was constantly applied.

These measures were more or less faithfully carried out, until a month ago, when I last saw the child, the parts presented their normal color and appearance, and there was no more need of medication.

Case B.—Came to me June 3, 1888. I copy the following history from my case book:

M. I., aged forty-three, married, two children, no miscarriages, menstruation appeared at sixteen years, is regular, flow profuse, preceded by pain and discharge of membrane. Leucorrhœa white, constant, profuse. Physical signs: Digital examination revealed cyst in posterior vaginal wall, uterus very painful to the touch, as also were the ovaries. The speculum showed no change in mucous membrane of vagina or cervix, except a piece of membrane protruding from the os.

I did not examine the uterus. The membranes given me for examination were the shape of the interior of the uterus, white in color, friable in texture, and presenting three openings. One of the casts had prolongations at the upper and superior openings, and a gelatinous substance, resembling an ovum attached to it.

Having no authority to believe that this was a cast of the tubes as well as the uterus, I sent several specimens to Dr. Mansfelde for microscopic examination, which he very kindly made, and the following is a report of his work. He says: "Evidently the specimens are the product of an exaggerated decidua menstrualis, and derive their novelty from the fact that they represent not only the cavity of the uterus but its three openings, and also to quite an extent the lumen of the fallopian tubes." Thus offering another link in the chain of evidence which proves the participation of the fallopian tubes in the monthly changes of the female sexual organs.

I could offer this woman no great encouragement as to treatment. She would not submit to a removal of the cyst, and I did not care to puncture and allow the contents to drain away every time I made an application. I believe, also, the weight of authority is that treatment does little good.

Feitsch, however, says: "Dilatation and strong cauterization of the uterine cavity are to be recommended."

Hart and Barbour say: "If the Dysmenorrhœa is membranous, treatment is of little service."

Thomas says: "When the etiology and pathology of a disease are unknown, it is astonishing to see how various, contradictory and energetic treatment usually is. Uncertain as we are of the pathology of the disorder, little can be said with any positiveness as to treatment."

Viburnum compound ter in die acted nicely in this case to alleviate the pain, and unless something unexpected should occur, the patient will probably continue to drag out a miserable existence until the change of life, the period not far distant for her, at which time so many women expect emancipation.

In presenting this case, which I believe to be not frequent in occurrence, the one peculiar feature is that of tube casts.

A CASE OF NEURASTHENIA, WITH ACTIVE CEREBRAL HYPERÆMIA A PROMINENT FACTOR.

By F. A. Long, M.D., Madison.

The patient who furnished the subject of this paper, is a short, sparely built man, of American birth, good family history, forty years of age, weight one hundred and thirty pounds, dark hair, sallow skin, of a typical nervous temperament, and a brilliant mind. By profession a lawyer, his work had made his fame co-extensive with the limits of north Nebraska. As a politician, he is known to the Republicans of the state as the present member of the National Committee. A man of intense application, his business had called for more nervous energy than his frail physique was able to supply. During the trial, or preparation for trial, of important cases, his appetite often wholly failed him, while at the same time he busied himself nightly in the office till after midnight, and after retiring was unable to get restful sleep. Following the fall term of the district court, in 1887, there was such prostration of strength that he was abed a week, and unable to do any work for several weeks. Anorexia, nervousness, a dull vertiginous headache, and sleep disturbed by almost constant dreams, accompanied this attack. It was also accompanied by mild dysenteric symptoms—tiresome and bloody stools—which yielded readily to treatment.

Contrary to my advise to take six months rest, he soon again entered the forum, and though several times about to break down, notably during the spring term of 1888, he continued his work up to and during the fall term. It was noticeable during July, August and September that his ambition and will power kept him up against great physical odds. A mild dysentery again attacked him during the summer, but was easily checked.

A murderer whom he defended had been convicted, and the result worried him greatly.

He returned home exhausted and dejected in spirits, lay around a few days, then again resumed work. He kept on feeling badly, however, and concluded to retire from business; but one more effort had to be made. A rape case was coming up for trial, and he must try it; after which he said his mind would be free and he could take much needed rest. The preparation for trial had so exhausted him, that when the time for trial came, he was able only by heroic efforts to drag himself out of bed. Promising me, that if the case were once tried, his mind would be untrammeled with business cares of any kind, I determined, if possible, to buoy him for the effort by administering coca cordial, and succeeded. The trial ended, his client acquitted —inspired by the exultation of a great victory —for a few days, he expressed himself as feeling unusually well. But the crisis came on the morning of October 25th, 1888; when, seated at the breakfast table, everything turned black before his eyes, faintness overcame him, memory became a blank, and he was about to fall from the chair, when he was picked up and carried to his bed. He talked incoherently for twenty minutes. Arriving within thirty minutes, the following was found to be his condition: Great prostration, unable to sit or stand, haggard expression, limbs, lips and voice tremulous, respiration labored, frequent sighing, pulse sixty and weak, pupils and tongue normal. He complained of pain in the forehead and cramping of right leg, with a tinkling sensation in it. It was believed at the time that he had suffered a mild cerebral hemorrhage, sufficient to explain the occurrence at the table and the cramping of the limb, but not sufficient to cause paresis, asymmetry of the pupils, or lateral protrusion of the tongue.

Whether this sudden collapse was due to that indefinite condition known as vertigo, or a mild cerebral hemorrhage actually did take place, will probably never be known, and practically, it matters little. For nearly a week anorexia was almost complete, after which the appetite gradually returned, and throughout the course of the illness, lasting over five months, there was no serious loss of appetite, nor trouble from indigestion.

The patient was unable to leave bed for nearly a month. The pulse remained slow, weak, and occasionally intermitted, though no cardiac lesion was to be discovered. There was an indescribable feeling of "goneness" at the epigastrium, on attempting to sit or stand. He complained of a feeling of bodily unrest, and trembling of the limbs; headache, expressed by a feeling of head pressure and heat, was constant; not severe at first, but preventing sound sleep, and progressively developing from partial to total insomnia. He became vacillating, obstinate, childlike, and any attempt to concentrate thought resulted in confusion of ideas, and was followed by greater nervousness and aggravation of headache, palpitation of heart, and a feeling of faintness.

During the first week Dr. Bear, of Norfolk, was called in counsel to see the case. We agreed that it was a case of "complete physical bankruptcy"—neurasthenia—and Bartholow's pill of digitalis, iron and quinia was suggested, and tried. The pulse at once dropped as low as forty, was weak and irregular, so that on the third day digitalis was discontinued, but the pulse continued weak, irregular and slow for two weeks. From the beginning, absolute physical and mental rest, a plain nutritious diet and general tonic treatment were ordered.

During the first month the physicians efforts were practically wasted, because the patient's mind was constantly harrassed by business cares, and the importunities of "patriots," immediately following the November election, willing to sacrifice themselves on the official altar *pro bono publico* become alarming. Sedatives and hypnotics produced little good while friends and office-seekers besieged him. The insomnia was growing on him, and was already a very serious matter. All visitors were therefore excluded; the patient was allowed to see his mail but not answer it, and read the dailies. Two weeks of this sufficed to show considerable improvement in his general condition, although not much sleep was obtained. The pulse became stronger, more nearly regular, head ached somewhat less, he became able to be up all day without fatigue.

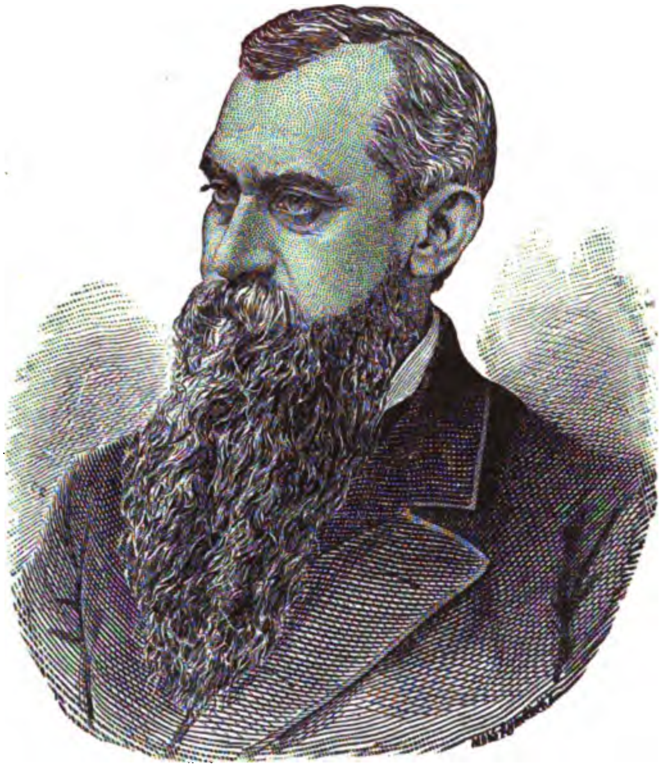
But this condition was not destined to last long. The headache again became violent, most severe on right side; the head was hot, and felt at times as if it must burst, at other times as if it were constricted by a band; every throb of the temporal arteries caused sharp pain. Pulse ranged from 80 to 100 when head ached worse. The slightest effort to concentrate the mind on anything but the ordinary daily routine caused a vertiginous feeling in the head, and was followed by more excruciating headache. The patient was in the habit of expressing it thus: "My head begins to swim, everything dazzles before my eyes." The sense of hearing became very acute, *tinnutus aurium* was constant but more acute in right ear. Insomnia became absolute. Though so sleepy at eventide that he could hardly hold up his head and keep open his eyes, the moment he assumed the horizontal position in bed he became wide awake, and so remained all night.

Occasionally there was a "choking sensation around the collar band," accompanied by a fullness of veins of forehead, temples and neck, complained of. Dark circles formed around the eyes. The feeling of "goneness" at the epigastrium occasionally returned, usually after excitement, accompanied by palpitation of the heart and bloating of the abdomen to such an extent that his pants must be unbuttoned. His temper became violent; he was peevish and irascible. He had several times given vent to his impulses by acts that could not be considered rational, and one morning, after an unusually restless night, he arose and deliberately burnt his shirt, collar and tie. He knew not why, and when asked about it in the evening he was very sorry, the sorrow amounting almost to melancholy. It became evident to his physicians that in addition to a neurasthenic condition, one of cerebral hyperæmia must now be dealt with.

Spitzka in Pepper's system, (Vol. V., pp. 769, Art. "Cerebral Hyperæmia") says: There is "a feeling of head pressure, associated with more or less severe, dull pain, aggravated by mental exertion, or when out of breath, and accompanied by a subjective sense of mental dullness." "There is usually a vertiginous sensation, and an irritability of eye and ear." "Sleep is at first disturbed by vivid and frightful dreams; later it becomes interrupted, and an ultimately complete insomnia may develop. The action of heart is accelerated in some cases; in that event there is increased pulsation of carotids, flushing of face, injection of conjunctiva, and a subjective sense ot heat in head and face is experienced." "Such a condition is usually slowly produced, several weeks or months being occupied in its development. At first the unpleasant symptoms occur only at certain hours of day with temporary exacerbations and remissions." In a large number of cases the head sensations become more or less localized; while the general feeling of pressure or dull ache may continue, a special area which can be covered by palm of hand, usually on the left—either on the middle part or to one side—of that part of the vertex, is the seat of more severe pain, complained of as hot pressure. Patients frequently claim that the temperature is higher at this spot, and contrary to what might be expected on *a priori* grounds, the statement will be confirmed, not alone by the coarse method of using the hand, but by surface thermometer."

During the whole month he had but two nights sleep, induced by hot baths and chloral. Any repetition of the same produced no effect. All the ordinary remedies and combinations of remedies had been tried and failed to produce sleep. Hot foot baths, cold applications to head, blisters to feet, in conjunction with hypnotics, all were unavailing. His condition was pitiable in the extreme, and it was painfully evident that if relief were not soon at hand the patient would become hopelessly insane, a fact which he seemed to realize, and the worry over the fact added additional terror to the case. At this stage he had strength enough to be up all day, and even could go out doors, and he was directed to rise promptly at a certain hour every morning, and take a cold sponge bath.

Cantharidal blisters two inches square were applied to nucha once a week. The hair was shingled, and for temporary relief a lotion of oil sassafras and dilute alcohol was applied to scalp. Extract nux vomica had been and was continued as a tonic-stimulant. Central



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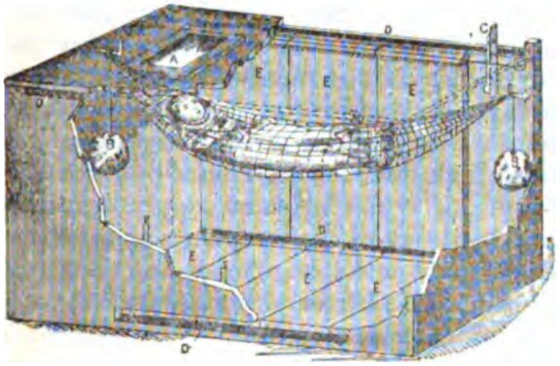
Original Articles.

LA CONVEUSE—FUERST.*

A PLEA FOR THE BETTER CARE OF IMMATURE CHILDREN.

By A. S. v. MANSFELDE, M. D., Ashland, Neb.



" LA CONVEUSE—FUERST."

A—Window. B—Moist sponges. C—Thermometer. D, D, D—Openings in box, above and below, for ventilation. E, E, E, E, E—Hot soapstones, for heating.

"It is uncommon, indeed, to see a viable fœtus under the seventh month; but one of five or six months, or even younger, if living when expelled from the uterus, *must take time to die just as well as an older child.*"—*Medical Record, August 31, 1889, p. 224.*

This quotation I beg leave to supplement by asserting: "A six months child, or even younger, if living when expelled from the uterus," *may continue to live*, if the proper conditions are presented.

One seeking to acquaint himself with the conditions, will be surprised at the meagre advice offered for his guidance. The four volumes of Charpentier, as edited by Dr. E. H. Grandin, contain not one word upon the subject; and in speaking of the management of children born at term, he says: "The main thing is that the infant be warm. The infant's head should be covered and kept warm, and is to be placed in the crib, and bottles filled with hot water placed under the crib covering." This little good the editor endeavors to efface by saying: "We would advise rather that the infant's head be not covered, as is often the case, by the bed clothes. The child needs pure air, and this it cannot obtain with covered face. * * * In this country, where means of heating our houses are more perfect than in France, it seems unnecessary to place hot water bottles in the crib."

Aside from the ambiguous language used by the translator, it may not be amiss to suggest that the head is not the part which, when covered, interferes with breathing fresh air—they are mouth and nose, which, in this country, are used for respiratory efforts—and to leave them free is not bad advice, provided the surrounding air is warm enough for the child's purposes, and that is far from being so in numberless cases; and if the babies of France are less fortunately supplied, as the translator asserts, they are to be pitied indeed, for in this country thousands of babies die of capillary bronchitis, annually, because of the very unsatisfactory heating arrangements. In fact, one who observes is forced to believe that in matters of breathing properly warmed air, the infants of the United States are in the position of the old-time Russian babies, who are said to have been bathed at their birth in ice water; those dying in consequence were supposed to be too weak for Russia. The cold air bath is substituted today almost everywhere, with the exception of a few houses on Fifth avenue, perhaps, which Dr. Grandin evidently mistakes for all the country north of Mason and Dixon's line.

But, seriously, the extract just referred to presents a fair average of the amount of labor bestowed upon this subject by the authors of works on obstetrics. The journals follow suit. The excellent *Journal of Pediatrics*, from its inception to this day, makes no allusion to the treatment of prematurely-born children. The world renowned *Journal of Obstetrics* gives a few abstracts, until we come to the volume for 1887, in which, on page 1022, a very creditable paper, from the pen of Prof. Wm. H. Taylor, "On Some Points in Relation to Premature Children," is presented. In the discussion following Dr. E. W. Mitchell says: "An incubator is a good arrangement, but unfortunately can not be just at hand when needed. It might be provided when premature labor was induced." We will see that with our present knowledge upon this subject this quotation no longer excuses a neglect of supplying the proper conditions to keep the baby alive.

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*Read before the Medical Society of the Missouri Valley, September 20, 1889.

In this connection allow me to point out a rather inexcusable error committed by Dr. Louis Starr, as editor of the department of "Dietetics of Infancy and Childhood," in the Annual of Universal Medical Sciences for 1888. Vol. iv, pages 280-283, he describes "*Tarnier's hatching cradle*," and gives an illustration of it, when the description and picture represent the very much simplified conveuse of *a auvard*, which really has nothing in common with the incubator of Tarnier, but the happy thought.

Nature furnishes examples enough of the necessity of post natæ hatching. The warmer nests, instinctively supplied for the new-born young in colder climates, have been imitated by human mothers in the additional dress, with which they supply their offspring. The order of *Marsupialia*, which habitually throw their young in an immature condition, have pouches (*marsupia*) in which they hatch their young; these remain attached to the nipples for varying periods, and the muscles of the mammæ express the milk into the mouths of the embryos, for such they really are, until their strength permits them to do the work of sucking for themselves. These and many other provisions of nature have evidently been the prototypes for man to provide his own offspring with the varying contrivances for protection from climatic vicissitudes, from a covering of ashes, leaves and skins, to a wrapping of cotton-batting, hot water bottles and the conveuse of Hearson-Eustache.

The more primitive hatching apparatus in the form of a double-walled bathing tub, made of metal, and the space between the walls supplied with hot water to increase and maintain the temperature, was evidently the work of Dr. von Ruehl, the physician to the Empress Maria Feodorawna, wife of Paul I, of Russia, who used such an apparatus in the Imperial Foundlings Home, at St. Petersburg, in the year 1835. Some time in the years 1854 to 1857, Prof. Crede, of Leipsic, and the professor of clinical surgery, Dr. Denuce, of Bordeaux, first used a similar contrivance. Neither knowing anything of the design of the other, and both having never heard of its use by Dr. von Ruehl many years before. These tubs supply an increased amount of heat, which, with great care, not possessed by many nurses, can be kept at a fair average temperature; yet they lack one essential, a warmed air for breathing purposes. This defect was supplied by the happy thought of Prof. Tarnier, to apply the principle carried out in egg hatching *apparati*, an exhibition of which he attended at the Palais Rameau in 1878, in the manufacture of a baby hatcher—a conveuse, which was made for him by Odile Martin in 1881.

This incubator, unlike those of v Ruehl, Denuce, Crede and Winkel, which derive their source of heat from hot water, gains its higher temperature by the use of hot air.

For completeness sake it may not be amiss to say that whilst the three first mentioned authors place their babies in a nest *surrounded* by hot water contained in double walls, Winkle endeavors most ingeniously to imitate the uterus and its amniotic fluid by immersing the whole baby, except its head, in hot water. This artificial uterus being supplied with various contrivances to renew the water and remove the baby's excreta. But as near as his apparatus may imitate physiological requirements, it shares with others the necessity of great care in their management, and also the lower temperature, which the child is compelled to breathe. These defects are entirely removed by the conveuse of *Tarnier*, as modified by *Hearson* and *Eustache*. This conveuse consists of a large box, which is divided into two compartments, the lower for a metalic water chest, the upper for a crib to contain the baby, or more of them. The main box is closed on top and its cover is provided with a window and place for the escape of air. To say that this contrivance is a miniature house, supplied with a self-regulating, hot water heating apparatus, and is inhabited by a baby, fully covers the facts in the case.

Now such luxury is possessed by but very few families, and it is equally out of the reach of but few babies, outside of richly endowed foundlings homes, and it must therefore be considered a happy thought, which A. Auvard had, and put into practice in 1883, by the construction of his Nouvelle Conveuse pour la clientele privee. This incubator is also divided into two compartments, but one is in communication with the other, the lower one being supplied with hot water bottles, from which the upper one derives its warmth and in which the baby rests. Of course the bottles are renewed as required.

This conveuse of Auvard in turn has given rise to the one I shall presently show you, one so simple in its construction and so cheap in its furnishing that it can be made and owned by almost anyone who can use a saw. and hammer, and has in addition enough love for the wee bit of baby, for which it is intended. This incubator, called by its author, Privat Docent Dr. L. Fuerst, of Leipsig, "An Improvised Tile Warming Chest," is thus described by him in the *German Medical Weekly* of September 1st, 1887, page 775: Any wooden box with cover at least sixty-three cm. long, thirty-seven cm. broad and forty-two cm. deep, has nailed upon the four corners of its top, blocks of wood from one to one and one-half cm. in thickness, upon which the cover of the box can rest, thus providing an opening for the exit of air. To furnish an opening for the entrance of air and for the use of additional soapstones, an opening is made on one side at the bottom of the box, wide enough to admit three soapstones side by side and a little higher than the thickness of the stones, so that the air can freely enter. The cover of the box also receives two openings; one for the attachment of a pane of glass for a window of observation, and another, a smaller one, for the adjustment of a thermometer, as a guide for the maintenance of an even temperature. The interior of the chest is as simple as its exterior. Into each of its four corners an eye is screwed, eight in number, and through these near the bottom and top of the box two wires are horizontally drawn. The only object of these is to fence out the soapstones, which are vertically placed between the wires and the walls of the chest, except, of course, the three stones which are slipped into the lower opening. Enough room should be left between the wires and the walls to allow the easy placing and removal of the stones, yet not enough to permit their falling over. Simple handles of rope are fastened through small holes in the narrow sides of the chest, thus facilitating the removal of the chest from one room to the other. Two hooks on the inside of the chest above the handles, are for the attachment of a hammock, into which the child is placed, and at the same time the hooks serve to hold wet sponges to moisten the atmosphere which surrounds the child.

A board in the bottom of the hammock makes of the latter a safe receptacle, which is made more secure by being tied with ribbon over the child.

Before this box is used it should be heated to a temperature of 90°, where it is easily maintained by occasionally changing a *stone for a hotter one. It takes thirteen in the box, a reserve of a few more in the oven of a stove will supply the changes.

"The air in such a chest can circulate freely. It enters at the bottom, where it is warmed, is impregnated with moisture from the sponges and after enveloping the child on all sides, escapes at the top; it is constantly renewed and furnishes fresh and *warm* air for respiration at all times. The temperature of the body is, as experiment proves, increased; the radiation of heat from lungs and skin lessened, and loss of temperature, so dangerous to the child, prevented. The main thing, however, is the ease with which the conveuse can be made and the trivial cost of the same, which permits its use anywhere, and by any one who can lay the least claim to a nurse.

A Case.—December 10, 1888, I was called to a Mrs. D., and found her in labor. Having had premature labor before, I ascertained that the child could not be more than six months old, which was fully corroborated by the child's appearance afterward. I procured a pasteboard box from a shoe store, and put some cotton batting in it; the cover was perforated with a few small holes for air. I had some brick heated and also a quantity of sweet oil. The moment the child was born it was wrapped in warm flannel and then the cord was severed. Now the baby was quickly anointed with the hot olive oil and wrapped in cotton batting and laid in the box already described; then an extra layer of cotton was used as a cover and the lid of the box put on. This box was placed on the heated bricks, one laid on each side of it and several on top of it. By occasionally changing the bricks for hot ones, a high temperature was maintained. Several days after the conveuse of Fuerst was made and the baby placed in it. The mother having no food for the child, in fact the child was too weak to suck, I gave the baby a mixture of the upper layer of new milk, which had been strained but twenty or thirty minutes; thus I procured milk richer in cream, adding water, and a few drops of brandy to each feeding, which was done from a spoon at first every hour, afterwards every two hours. I had the pleasure, in the course of three weeks, of seeing that baby nurse its mother, having gained wonderfully in this short time in strength and weight. About this time the mother began to be careless and adopted the most pernicious of all customs—she put the baby, wrapped in the covering usually worn by our American babies, *on top of her own bed.* Of course, here an adaptation of its surroundings to its own temperature was out of the question; it is out of the question even for a strong child, born at term, and, of course, the inevitable result followed—death of the child.

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*It is called a tile chest by the author, because he uses tiles—used for roofing houses in Germany—these are not used in this country, and I have substituted soapstones for them.

Can it be possible that this inexcusable practice of putting babies on top of large beds is perpetuated, because physicians do not fully comprehend the danger to the baby? It seems a few lessons in the physiology of heat, as it concerns the homorothermous animal, would suffice to put physicians on their guard, and, of course, they would then condemn with no uncertain language, this baby-killing practice of parading them on their mother's beds. The horrible slaughter of innocents, which goes on incessantly from all manner of causes, would certainly receive a great check if babies were, all of them, kept in hatching boxes for months after their birth, instead of frozen to death by the radiation of heat, which is neither supplied by their own tiny metabolism, nor stayed by proper surroundings.

Do not fear that I will take advantage of you and convert this hall into a lecture room; yet in taking from this place an impression of the ease with which you can supply artificial heat (thanks to the work of the noble men whom I have had cause to mention) do not forget that the prematurely-born child contends with all the odds against the maintenance of an even temperature, without which life is impossible. Its tiny organs, inactive and immature, are out of proportion to the surface of its body, from which more heat is radiated than food and metabolism can furnish. The panniculus adiposus, such a barrier to the escape of heat, is undeveloped. Substitute *this* with the environment of the conveuse; feed the child its mother's milk if you can, milk of the cow, prepared as I have suggested, if you must; use the spoon for feeding, and if the child will vomit or cannot be fed, use *gavage;* it will often save when ordinary feeding fails; and finally surround the child with a constant moist atmosphere of at least 85 to 90°. We lose 66 of every 100 prematurely-born children, I mean babies which do not weigh more than 2,500 grams and measure more than 45 cm. The maternities of St. Petersburg, Leipsic, Paris and London have reduced the figures to 36 per cent.! What are we doing in Iowa and Nebraska to lessen this death rate? How many incubators exist in the Missouri Valley? May my effort send you to your several homes with the conviction that "six months babies, when born alive," shall continue to live, if you can help it, even if you yourselves must turn carpenter and make *incubators.*

*TREATMENT OF INFLAMMATORY DIARRHŒA IN CHILDREN.

By L. A. Merriam, M. D., Omaha.

By inflammatory diarrhœa I mean what is known as entero-colitis by the profession, or summer complaint by the people, a disease very common in July and August of each year. I have chosen this topic to excite discussion, and bring out especially the dietetic treatment of the same. Whether the disease be classed as chemical, microbic or ptomainic, the essential causes are, improper alimentation and the influence of increased temperature. Most mothers feed their children too many times a day. It is common for mothers to nurse their babes from twelve to twenty times in each twenty-four hours, or every time they cry. Besides, they feed them from the table at meal time and give them milk between meals, making in some cases as many as twenty-five or more feeding times in twenty-four hours. This gives the stomach little or no time to rest, debility of the stomach and intestines follows, the food is imperfectly digested and fails to be assimilated, the contents of the stomach become sour, vomiting and diarrhœa ensue, and the conditions are favorable for the growth of microbes and the formation of ptomaines. Then follows enteritis, perhaps peritonitis and the whole train of nervous symptoms, finally ending in marasmus and the death of the patient. It is a well established principle that when a child is three months old, it should be fed only three times in twenty-four hours. I insist, therefore, that this rule be followed absolutely in every case. The mother and friends sometimes rebel against this rule and consider it cruel in the extreme. Then I tell them I will not treat the case unless it is followed. They can have, if they like, a physician who will humor their notions, they can see their child suffer for weeks, and ere long languish and die. They can weep over the departed, clothe the little innocent one in a garb of white amid beautiful flowers, they can purchase a white casket in which to place the sweet babe, they can gather at the funeral ceremony, while hearts are rent and torn, and they can lay the cold form away in the bosom of mother earth and reflect that they were instrumental in the death of that child.

Erroneous notions prevail not only among the people, but also among physicians, and it is often very difficult to get them to accept and adopt the truth. Their inability to cure their patient they conceal by saying the child is teething, the diarrhœa must not be stopped too soon as the disease may go to the child's head, and many other equally erroneous ideas. Long ago was it definitely settled that dentition or teething was not a cause. The disease properly treated cannot be checked too soon. Too many physicians consider their duty well done when they meet conditions and symptoms as they present themselves. They should be able to do more, should know enough to anticipate conditions and prevent them.

As Jacobi says: "It is not enough to busy myself with subcutaneous injections of brandy when a collapse has set in, which I ought to have foreseen and prevented." To so jugulate the disease that it will not become severe; in other words, to prevent the pathological lesions from being produced, is the first and chief object of treatment. In the disease under consideration the first step is to allow only three meals per day, breakfast, dinner and supper, with absolutely no food of any kind between meals. When the child cries it is often beceause it is thirsty and needs water to drink, and not because it is hungry as most mother's suppose. Water should usually be given when the stomach is empty, or a little while before feeding. Water is necessary to aid digestion, but in some cases it is necessary to abstain from water for six or even twelve hours. Especially is this true in cases of excessive vomiting and severe diarrhœa. If any suspicions arise as to the impurity of the water, it should be boiled before being used.

It is a physiological fact that in the process of development the intestines are particularly susceptible to slight irritations, hence no more food must be given at each meal than can be thoroughly digested and completely assimilated, for any excess of food will be irritating to the intestines, and by its fermentation and decomposition render the

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*Read before the Omaha Medical Club, October 4, 1889.

contents of the stomach and intestine acid, whereas it is a well established fact that it should be kept alkaline. Unless this rule be followed a favorable medium is presented for the development of the various bacilli and the poisoning of the system by the production of ptomaines.

When first called to see a case, it is often well to irrigate the stomach and rectum by use of a soft catheter and funnel, using warm water at a temperature of 100° to 104° Fr. This is an easy matter, and not particularly objectionable to the child. If any difficulty is encountered in passing the tube by the mouth, it can be easily passed through the nose. The quantity used will depend upon the size and age of the child, varying from an ounce to a half pint or more. When this has been thoroughly done two or three times at the first sitting, the relief afforded is often surprising. This is to be followed by complete abstinence from food for from six to twelve or even twenty-four hours. In washing out the large intestine it is necessary to introduce the catheter above the sigmoid flexure and by position to be sure and reach the entire colon. In some cases I have deemed it best to clear out the small intestine by giving a few small doses of calomel. The only food that should be given during the twenty-four hours is the white of an egg in a half-pint of water, though I usually give no food whatever. The child will not suffer from lack of food, but will be the better for it. If there be much irritation of the intestine, the proper use of codeine and hyoscyamine will give quiet and a cessation of the spasms. The use of preparations of opium and astringents is in most cases to be avoided, as they are injurious, dangerous, and contrary to all scientific principles of treatment. Brucine may be given when a nerve stimulant is required, it being milder than the arseniate of strychnia. Quassine may be given in conjunction with brucine when a tonic effect on the stomach is required. If there be much vomiting codeine and cocaine can be added with advantage, though this is usually unnecessary, as the washing out of the stomach relieves these symptoms. I have found the salicylate of bismuth very beneficial after the acute symptoms are relieved, especially if the stools are of a liquid character. Though several agents have been used with the idea of destroying the pathological germs, none has yet been discovered that is both safe and reliable, though I have used resorcin three or four times a day in from three to five grain doses with seemingly beneficial results. But above all things abstinence from cow's milk must be insisted upon, using breast milk, or some of the prepared foods, chief among which I place the peptogenized milk powder and Mellin's food, being sure never to give more at a time than can be appropriated and not more than three times in each twenty-four hours, with regularity as to meals. In some cases, even the mother's milk must not be given, for it is a well known fact that milk furnishes an excellent medium for the development of these pathological bacteria. Sugar and water or white of egg and water is often far preferable for a few days.

The varying conditions found in the different cases presented to the physician must have their appropriate treatment, hence my discussion of this subject has been the general principles involved, leaving each particular case to the judgment of the attending physician when he is called to the bedside. Trusting your criticisms will be full, free and liberal, I thank you for your kind attention.

ADDRESS

Delivered at the Opening of the Present Session of the Omaha Medical College, October 1, 1889.

By Don. Macrae, M. D.*

At this, the introduction to the session of 1889–90, it is fitting that we should congratulate the Omaha Medical College on the interest sufficiently manifest to draw so many of Omaha's cultivated ladies and gentleman to our inaugural exercises. Your presence and countenance is reassuring, and our labors are thereby lightened and made more enjoyable. The position of teacher in a medical college is not by any means the easiest of tasks. The many new points in the various branches of the profession, new theories, new methods of treatment, the thousand and one advances all along the line, require a new and carefully scrutinized and quite altered edition of lectures from the session preceding, and this study is done in the midst of the arduous duties dependent on the daily and continuous work of the practicing physician, who tries to keep up with everything new and make them sufficiently his own to be able to communicate them intelligibly to the young people who come here to learn of him. The few remarks which I will make, though I hope they will be of some interest to you all, are, however, directed to the students of the college. Their duties commence on the morrow and their lives and ours are bound up, animated by a common impulse and common desire to learn all we can, and pursue our studies with ardor and pleasure.

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*Professor of the Principles and Practice of Medicine in the Omaha Medical College.

Science is classified knowledge. Life is organization in action. Medicine is not an exact science. It never will be unless there is discovered some primitive fact that will bear to it the same relation that the law of gravitation does to astronomy and the atomic theory does to chemistry. Health is the normal, and disease the abnormal condition of life. All that we can know of physical or mental life, all facts that relate to health, all facts that are known or can be known of disease, come within the range of medicine. Medical art is a body of rules—the by-laws of its science. Medical science is the result of reason always; medical art is still largely the practice of empiricism and experience. For this reason it is not stationary. For this reason it is advancing. For this reason it will progress until the ultimate fact is reached which will stamp medicine as an exact science.

To the imperfect state of medical science, the discordant and empirical condition of medical practice, is due the present unsatisfactory political and social status of our profession. Why is it that so much is exacted from and so little given to physicians by the public? Why is it that a like exactness in every other avocation is not looked for—nor is it demanded? The mistakes of all other professional men—of all other men of science—are easily forgiven. But no such charity is extended to the physician. Even the most intelligent men treat the unsuccessful physician as the savage does his unfaithful *fetich*. To what is this due? Let us look to the history of medicine for an answer.

Primitive man saw in disease the manifestation of anger in the Diety, and in the return to health the restoration of the favor of his God.

The chief attribute of all divinities has been the power of inflicting disease and death upon man and the ability to restore him to health and to life. Hence early in Pantheism we find a God of medicine. Under various forms and with many names he had his temples and his priesthood. The medicine was shrinecure. The priest was the physician. It is true that the Egyptian priest and the Pythagonians visited the sick at their homes, but they went as wonder workers. It is true the temples of the healing God—the Asclepia—were both hospitals and schools for the culture of the priest physician; but the medicine was miracle-cure, was shrine-cure.

It is only after man had progressed far into intellectual development that we find medicine separated from religion and any attempt made to expose the quackeries of medicine and shrine cure.

It is to Hippocrates, the great physician of Cos, the divine old man, his disciples called him, we owe the first attempt to free medicine from priest craft, to teach man that disease is not of supernatural origin, but results from his own folly, from his disobedience of natural laws, from his unrestrained appetites and passions, from his neglect of sanitary rules and from his abuse of his fellows.

It is to Hippocrates that we owe the first attempt to teach man that the continuance of his health and its restoration when he is diseased must largely depend upon his own action, and must always be through the agency of physical causes.

Hippocrates we should always revere as the father of medicine, as the founder of rational, of scientific, medicine, and I believe we may go further and say, as the founder of inductive philosophy, without which there could be no modern science.

Aristotle, whose father was a physician, kept a drug store in Athens, and it was while compounding the prescriptions of the disciples of Hippocrates and dispensing their medicines over his counter, that he became familiar with their master's doctrine, and his method of thought.

Imbued with them, he took issue with his own master, Plato, and so formulated inductive reasoning that his name reigned supreme through many ages.

But the medical tree that Hippocrates planted had hardly begun to bear fruit, when it was withered and barren for ages. With Constantine the Great was the return made to fetichism in medicine; a return to relic cure, to miracle cure, to shrine cure.

During the long intellectual night that then soon settled upon Europe, all knowledge of the teachings of the Greek and Egyptian physicians was in the hands of the priests and the monks. The Christian world received no benefit from them. The embers of scientific and rational medicine were kept alive only by the Jewish and the Arabian physicians.

The Saracen, and especially the Spanish Moor, could secure the skill and care of the physician and surgeon, while the Knight Templar could only seek restoration from the effects of disease or wounds through the healing efficacy of saintly relics, by pilgrimage to shrines, or by the working of miracles. It was not until the return of Europe from intellectual night to intellectual day that Medicine again burst the shackles that bound her to the priesthood, and there was a return made to the Hippocratic doctrine. With slow and constant step she has ever since progressed. But to-day when she is making more rapid advancement than ever, she is not without fetters.

Fatalism in medicine, superstition as to the causes of disease, and in the use of remedial agents, still exists. To this is due the existence of the different medical heresies. From this source springs all the opposition to the passage of a proper state medical bill. From this cause comes the chief obstacle to the success of state and municipal boards of health. From this source springs the greatest opposition which we meet in the practice of our art. To this is due all the abuse which is heaped upon physicians, all the neglect with which they are treated as sanitarians.

From this cause more than all others, if not from this cause alone, arises the want of proper political and social recognition which the intelligent physician receives from his fellow-citizens. It is for this reason and from this cause alone that he who is self-styled "doctor," stands with the masses upon the same social plane with the physician. Man still believes in the theological doctrine of the nature of disease. He still believes in relic cure, in miracle cure, in shrine cure. He still believes that supplication will obtain the special intervention of the Deity for the prevention and stoppage of epidemics and the restoration of the diseased to health.

You do not need to witness the throng of suppliants at the shrine of our Lady of Lourdes to be cognizant of this fact. You have only to look about you to see that this ancient opinion still exists, to see that it manifests itself in the case of the diseased and in the habits of those that are well; in the neglect of personal and municipal cleanliness, in the use of placebos and specifics, in the success of thaumaturgists, of magic healers and of faith doctors.

When will this end? When will come the complete emancipation of man from the theological doctrine of disease? When medicine has so far advanced that the success attending its practice gives quacks no place among the people, then, and not till then, will the belief in the Hippocratic doctrine be universal. It may seem utopian to think that time near at hand. But I believe it is not far distant. The higher the intellectual plain upon which man has stood, the better has been his medicine. Medicine marches on equal step with her sister sciences and the arts toward perfection. To-day, more rapidly than ever, she is casting from herself the effete doctrines and methods of the past. You will be taught better medicine than your fathers or your elder brothers.

I believe that we are on the eve of great discoveries in medicine. The astonishing progress that is being made in microscopic anatomy and physiology, with the culture tests of differential germs, must soon have its effects upon pathology, upon practical medicine and hygiene, as it relates to the state and to the individual. The three healing graces—physiological rest, support and cleanliness—have been exalted and will remain upon their thrones, whether Listerism is true or not, or whether there are pathogenic bacteria or not. With so much advance, so much accomplished in the recent past, what may we not expect in the near future.

The proper and scientific use of medicine depends upon the careful and intelligent training of the student. He must first be well grounded in anatomy, physiology, and the science of medicine. These can be taught in the lecture room, where by close study and careful attention to its teachings, the foundation is laid. For instance, in my own chair, the Principles and Practice of Medicine. By the principles of medicine we understand those truths and doctrines which have been ascertained and established, slowly indeed and irregularly, but still with considerable precision, by the continued observation of attentive minds throughout the entire progress of medicine. These principles I profess to teach you. The practice of medicine or the particular application of those facts and doctrines I shall describe to you; but I cannot profess to teach it in this room, nor can you learn it, except in a very imperfect sense, from my description of it. It is the science that I shall endeavor to unfold. Skill and facility in turning that science to useful purposes I am unable to impart. These are qualities that do not admit of being communicated from one mind to another. The practice of physic, like every other practical art, is to be learned by its repeated exercise, by habit, by carrying its various acts into direct effect again and again, or if they happen to require no manual dexterity, by looking on, and seeing them done again and again. It is in the wards of the hospital, or in the domestic chamber—it is among the sick and the dying—and there alone—that you can either thoroughly or safely learn to practice medicine.

At this, the starting point of your career, how important it is, that you be sufficiently impressed with the solemn responsibility which rests upon each of you. Knowing as you must do, that the lives and welfare of the people will be entrusted to you in after life, how great the necessity for improving each hour, and wasting no time in frivolity. How necessary it is to build upon a sure and steadfast foundation, that you may afterwards be able to relieve pain and cure disease and assist your generation in advancing the art and science of medicine.

LETTER FROM THE SECRETARY TO THE MEMBERS OF THE STATE SOCIETY.

The attention of the members of the State Medical Society is called to the revised list of members published in this issue of THE CLINIC. For obvious reasons there are a number of ways by which errors may appear in a list of this nature—clerical errors, change of residence of members, and neglect to notify the secretary, etc. It has been the aim to make the list as complete and accurate as possible. In obedience to the expressed will of the Society, a number of names have been omitted from the old list, of those members who are in arrears for dues long past the period of limitation, some of whom have left the state, and some have expressed a wish to be "dropped." We earnestly request any member who notices any errors, and is possessed of knowledge to correct them, to give us the facts, and we will make proper corrections on the list in the offices of the treasurer and secretary.

M. L. HILDRETH,
LYONS, NEB. *Secretary.*

LITERARY NOTE.

The National Magazine for November will contain among other articles "Comparative Philology," by Prof. Schele de Vere, Ph. D., J. U. D., of the University of Virginia; "Political Science," by Prof. Raymond Mayo Smith, A. M., of Columbia College, and "Shakespeare," by F.W. Harkins, Ph.D., Chancellor of the new National University of Chicago, whose instruction by mail and University Extension System for non-residents now meeting with such favor, will also be explained in this number.

In future numbers will appear a Symposium comprising articles by prominent scholars and statesmen, giving their opinions on leading questions, such as "Darwin's Theory," "The Chinese Question," "Socialism," and "Should Immigration be Restricted?" Published the first of each month, at 147 Throop street, Chicago. Subscription price, $1 per year; sample copy 10 cents.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.

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OMAHA, OCTOBER, 1889.

THE OMAHA MEDICAL COLLEGE.

The opening exercises of the Omaha Medical College were held, as per previous notice, on the evening of the 1st inst. The college lecture room was well filled with ladies and gentlemen, thereby attesting their interest in the success of the school. Under direction of the trustees a general renovation had been made during vacation, and the beautifully frescoed walls and painted floors, were a pleasant surprise to all. Rev. Dr. Wm. J. Harsha opened the exercises with an appropriate prayer, after which, his Honor, W. J. Broatch, mayor of Omaha, made a few remarks, expressing his gratification that Omaha had such a flourishing school of Medicine; and advising the students to make good use of their opportunities. The address by Dr. Macrae, printed in this number of the CLINIC, was listened to with marked attention. Dr. Leisenring, chairman of the Board of Trustees, made some closing remarks, reviewing the past history and present prospects of the College.

In this connection we call attention to a change in the faculty. At the October meeting of the trustees Dr. L. F. McKenna resigned the chair of Clinical Medicine, for the reason that he expects to be absent a great part of the winter, and the interests of the school would be subserved by a new man starting at the beginning. While Dr. McKenna has always been a safe adviser and interesting teacher, the board could not do otherwise than accept his resignation, thereby reluctantly separating his connection with the college. Dr. W. O. Bridges was elected to fill the vacancy. As a young man well up in his profession, ambitious, zealous and laborious, he will, doubtless, do himself credit, and be satisfactory to the trustees and patrons.

* * *

CLINICAL FACILITIES AT THE O. M. C.—We are frequently asked when the several clinics are held by the different professors. For the benefit of such and all others who wish to send patients for treatment, we make the following statement: Dr. Galbraith holds clinics on surgery at 10 A. M. Mondays, Wednesdays and Fridays; Dr. Neville, surgery, at 2 P. M. Tuesdays and Saturdays; Dr. Bridges, medical clinics, at 1 P. M. Wednesdays and Saturdays; Dr. Denise, eye and ear clinics, at 1:30 P. M. on Thursdays; Dr. Peebles, gynecology, at 3 P. M. on Tuesdays; Dr. Biart, skin diseases, at 9 A. M. on Saturdays. This order will hold good, with the exception of Holiday week, till the last of next March. Thus it will be seen that ten hours weekly will be given to clinical instruction, giving this important feature marked prominence, and affording ample opportunity for physicians to send in such patients as they may feel desirous of receiving benefit from such opportunities.

LIFE INSURANCE AND HOMŒOPATHY.

We quote from a local homœopathic monthly:

"With but a few exceptions the life insurance companies refuse to accept the services of an homœopathic physician as examiners of applicants for policies, notwithstanding the fact that the applicants themselves are patrons of homœopathy and prefer the services of their own physician when submitting to a physical examination. This absurd discrimination is simply the result of prejudice. * * * * *The attitude which we should assume should be the same as that in any other business or professional capacity.* [Italics our own.] Let the management of these corporations understand that as long as they refuse our certificates they insult us and our friends, and we have no use for them. * * * * As long as they employ as chief examiners men, who use their office to promote discord and dissention in a community from which they derive their support, just as long should that community turn their backs and refuse patronage to their representatives."

Of course we would not have noticed this remarkable effusion from a medical standpoint, but since the writer assumes the high prerogatives of the *honest* business man, and upon these bases a new boycotting scheme—one in which the medical profession and life insurance companies are to be the contending parties, it may be well to inquire into the justness of the cause.

In the first place it is a fact, and the homœopathic editor knows it well, that the community by its individual applicants for life insurance is not a party to the contract existing between the companies and the physician. The individual represents simply the raw material, out of which the examining physician is to manufacture a risk for the company—and this risk will become a profitable one in the ratio in which the physician expends his honesty and his skill in behalf of the company, who employs him. It is, therefore, true that the more skillful and the more honest the examiner is the more likely will the insurance company profit by the contract. It is also quite true that such a company, so served, is the one which will in the end be most apt to fulfill every promise given to the insured. Now the attitude here assumed is one in harmony with that of the homœopathic editor, and it simply remains to be shown why insurance companies *do* and OUGHT TO OBJECT to examiners of homœopathic proclivities.

We will simplify our position by admitting that homœopathic physicians have facilities, and that the small minority of them make use of them, to obtain a medical education sufficient to answer the demands of a skillful life insurance examination. But we echo only the common belief when we join the majority by asserting that very few irregular physicians can lay claim to that quality of honesty which strict business principles call for.

We apprehend, unless a kind Creator has endorsed homœopaths *et id genus*, with qualities differing from the majority of mankind, that there are those among them who are learned in the fundamental branches of medical science, these, *as elsewhere*, are in the minority, but a minority differing materially from that of the regular profession. In the latter, a spirit of humility is necessarily engendered by their deeper knowledge of medicine, which is equalled only by their sense of weakness in the presence of hydra-headed disease. Not so with the homœopathic *savant!* He becomes more arrogant as his knowledge increases; necessarily so, because assumption of infallibility of his remedies is an absolute outgrowth of his claim that his remedies are prescribed in conformity with a *great* (?) principle, and the more insight into the facts of fundamental medicine and the laws of nature he acquires, the better does he know, that the assumption of a great principle, declared to to be contained in the Hahnemannic devise: "*Similia similibus curantur,*" is an inversion of the order of things; and to conform his relation to his patients thereto, simply means dishonesty to his convictions, his profession, and his patients. Are business men and companies expected to enlarge the sphere of dishonesty by drawing such people into their firms?

More learned, less honest; less learned more incompetent. Which evil shall the life insurance companies choose?

We take it this is also the platform for the *regular* physician to stand on. He knows his knowledge of man and his diseases is limited, and so is his power for relief of pain and cure of disease. No great principle guides him in his efforts to heal. To *believe* that such a principle exists is dangerous credulity, to *assert* its existence is arrogance, saturated by dishonesty. Association with the *believer* is inconsistent with good taste; companionship with the asserter at least permits the assumption of *particeps criminis.*

THE American Academy of Medicine is endeavoring to make as complete a list as possible of the Alumni of Literary Colleges, in the United States and Canada, who have received the degree of M. D. All recipients of both degrees, literary and medical, are requested to forward their names, at once, to Dr. R. J. Dunglison, Secretary, 814 N. 16th street, Philadelphia, Pa.

MEETING OF RAILROAD SURGEONS' SOCIETY OF NEBRASKA.

The society was called to order by the President, Dr. D. C. Bryant, of Omaha, in the office of Dr. G. B. Ayres, Tuesday afternoon, October 1st.

After some routine business was attended to, Dr. A. Conrad, of Crete, read a very interesting report of a case of railroad injury, resulting in fracture of the spine, and subsequent death of the patient. He exhibited the vertebræ taken from the subject. A very instructive discussion followed the paper, all agreeing to the importance of the subject, spinal injuries, and the able manner in which the essayist had presented it. Dr. A. S. v. Mansfelde. of Ashland, the Secretary of the Society, followed with a paper "On a modified method of extension for the treatment of fractures of the femur." Both papers will appear in the pages of THE OMAHA CLINIC. Dr. Benj. F. Crummer, of Omaha was elected to membership. The society adjourned to meet in Lincoln the first Tuesday in October, 1890.

THE Medical Society of the Missouri Valley held its second annual session in Omaha, September 19th and 20th, with 100 members in attendance, and a list of eighteen papers and two clinics on the programme. A hearty enthusiasm, harmony and good nature prevailed throughout the meeting. The papers presented were of a high order of merit, the cases shown were unusually interesting, and the discussions, though freely critical, and bristling with wit and humor, were courteous and full of profit to those who participated in the intellectual combat. We venture the assertion, with all due deference and modesty, that no more profitable and altogether successful medical meeting was ever held in this section of the country. The large ratio of membership ($\frac{1}{4}$ths) in attendance, the number of papers, the excellent quality of the essays, the spirited discussions, everything about the meeting, running through four sessions, more than exceeded our most sanguine expectations. To say that we are pleased and gratified does not fully express our feelings. We predict a great future for the Medical Society of the Missouri Valley. Already the membership extends over a large portion of Iowa and Nebraska, and during the coming year we expect to bring into the fold many physicians from Dakota, Minnesota, Missouri and Kansas. Let every member of this society exert himself personally to influence his medical friends and acquaintances to join their fortunes with us. The admission fee is $2.00; the annual dues are $1.00. Any reputable physician in good standing is eligible.

Applications for membership may be made to R. M. Stone, M. D., Omaha, Neb., Chairman of the Committee on Credentials.

MINUTES

OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY, HELD AT OMAHA, NEB., SEPT. 19-20, 1889.

The Medical Society of the Missouri Valley held its fourth meeting at Omaha, Neb., September 19 and 20, 1889, with Donald Macrae, M. D., president, in the chair.

The following members were registered as present, to-wit: Drs. Macrae, Emmert, Denise, Carter, Lacey, Thomas, Leisenring, Campbell, Hanna, Ralph, Towne, Milroy, Crummer, Peabody, Neville, Lord, Spalding, McKenna, Gifford, Dailey, Strong, Inches, Green, Porterfield, Somers, Kirkpatrick, R. C. Moore, Ross, Rosewater, Harrigan, Bryant, Stone, Jonas, Bridges, Summers, Seybert, R. A. Moore, Bacon, Houghton, Wilkinson, Merriam, Barstow, Berry, Trumbull, Knott, Sverson, Bowers, Wyland, Harvey, Beals, Hatton, Stewart, Hildreth, Slabaugh, Gibbs, Mattice, and others who did not register.

The committee on credentials reported favorably on the following applicants for membership:

Charles Inches, Scribner, Neb.; University, New York City, 1868.
Ira E. Atkinson, Octavia, Neb.; Omaha Medical College, 1888.
L. M. Matthews, Iowa City, Io.; Iowa University, 1888.
C. M. Hobby, Iowa City, Io.; Bellevue, N. Y., 1870.
W. H. Christie, Omaha, Neb.; Rush Medical College, 1868.
V. H. Coffman, Omaha, Neb.; Jefferson, 1866.
G. A. Yates, Brayton, Io.; Omaha Medical College, 1889.
J. P. Lord, Omaha, Neb.; Rush Medical College, 1882.
J. F. Larimer, Omaha, Neb.; University Pennsylvania, 1868.
Wm. Jepson, Sioux City, Io.; University Iowa, 1886.
J. W. Frazier, Honey Creek, Io.; Omaha Medical College, 1887.
Clark Gapen, Omaha, Neb.; Chicago Medical College, 1875.
T. M. Edwards, Woodbine, Io.; Bellevue, N. Y., 1874.
E. J. Taggart, Omaha, Neb.; Omaha Medical College, 1888.
F. A. Butler, Harvard, Neb.; Louisville, 1879; P. and S., Iowa, 1882.

C. B. McColm, Persia, Io.; N. W. Medical College, St. Joe, 1882.
R. A. Holyoke, Pacific Junction, Io.; Rush, 1884.
F. E. Coulter, Waterloo, Neb.; Rush, 1882.
L. B. Gillette, Omaha, Neb.; P. and S., Chicago, 1885.
W. C. Reeves, Lincoln, Neb.; Rush, 1885.
R. I. Mattice, Omaha, Neb.; Magill University, 1875.
W. S. Gibbs, Omaha, Neb.; Iowa University, 1879.
H. L. Hewetson, Omaha, Neb.; University Pennsylvania, 1886.
Henry C. Van Gieson, Omaha, Neb.; P. and S., N. Y., 1866.
E. E. Wormersley, Omaha, Neb.; National Medical College, D. C., 1883.

On motion of F. S Thomas, the report of the committee was adopted and the applicants elected to membership.

The minutes of the last meeting were read and approved.

SECRETARY'S REPORT.

To the Medical Society of the Missouri Valley.

Your Secretary begs leave to make the following report for the year ending September 19, 1889:

Your Society organized September 27, 1888; has a membership of 108, with 13 applications in the hands of the Committee on Credentials.

Three meetings have been held, at which there has been an average attendance of 65 members.

Sixteen (16) papers have been presented, all of which have been worthy of careful attention and consideration, and an honor to their authors. A few of these productions are of a high order of merit, are *especially noteworthy* for originality of thought and researches and are entitled to honorable mention for superior excellences.

The clinical cases presented to this Society very well illustrate the scientific skill and knowledge of our physicians and surgeons, and show results in which we may take a pardonable pride.

The enthusiasm prevalent in our Society is clearly indicated by the most excellent programme of 18 papers to be presented to your attention at this meeting. The future unquestionably holds for us great possibilities in the way of intellectual growth, development of professional skill, and strengthening of social ties. May the good work go on. May this infant society, so full of buoyant hope and earnest enthusiasm, grow into a ripe and glorious maturity, the compeer of any of its kind throughout the country.

Respectfully submitted by
JAMES CARTER, Secretary.

Omaha, Sept. 19, 1889.

SUPPLEMENTARY REPORT.

Your Secretary has received in monies for admission fees and annual dues $193, which has been duly accounted for to the Treasurer, as per statement here appended:

Sept. 28, 1888, paid Lacey cash	$ 104 00	
Sept. 30, 1888, paid Lacey cash	4 00	
Oct. 24, 1888, paid Lacey order No. 3	6 00	
Oct. 29, 1888, paid Lacey cash	2 00	
Dec. 19, 1888, paid Lacey order No 4	6 00	
Dec. 20, 1888, paid Lacey cash	32 00	
Mch. 22, 1889, paid Lacey cash	10 00	
Sept. 19, 1889, paid Lacey cash	2 95	
Sept. 19, 1889, paid Lacey cash	26 05	
		$193 00
Cr. by cash fees and dues from Sept. 27, '88, to Sept. 19, '89		$193 00

Respectfully submitted by
JAMES CARTER, Secretary.

TREASURER'S REPORT.

COUNCIL BLUFFS, IA., September 19, 1889.

To the Medical Society of the Missouri Valley:

I herewith present my report as Treasurer of this Society for the year ending this date. I have received from the Secretary the monies as per the following items, and have paid out the various sums as shown by accompanying vouchers:

September 27, 1888, to cash from Secretary	$104 00	
September 28, 1888, " " "	4 00	
October 28, 1888, " " "	2 00	
December 20, 1888, " " "	44 00	
March 22, 1889, " " "	10 00	
September 18, 1889, " " "	29 00	
		$198 00
September 27, 1888, by cash per voucher No. 1	$ 6 05	
September 27, 1888, " " " 2	1 50	
November 5, 1888, " " " 3	30 50	
December 20, 1888, " " " 4	6 00	
December 20, 1888, " " " 5	8 00	
December 20, 1888, " " " 6	10 00	
December 20, 1888, " " " 7	3 00	
January 5, 1889, " " " 8	5 00	
March 22, 1889, " " " 9	10 00	
April 1, 1889, " " " 10	2 05	
April 22, 1889, " " " 11	30 00	
September 18, 1889, " " " 12	26 05	
		$138 15
By balance		54 85
Total		$193 00

Respectfully submitted,
T. B. LACEY, Treasurer.

The chair appointed R. M. Stone, R. C. Moore and W. O. Bridges a committee to audit the accounts of the Secretary and Treasurer.

The Auditing Committee reported the accounts correct, which report was adopted, on motion of P. S. Leisenring.

Drs. Watson, of Dubuque, Ia., Fairchild, of Ames, Ia., and Deering, of Iowa, were made members by invitation.

The amendment to the Constitution, offered by James Carter, transferring the duty of collecting dues and fees from the Secretary to the Treasurer, was adopted.

On motion of B. F. Crummer, a bill of $16.00 from the Committee of Arrangements for hall rent and printing was allowed, and the Secretary directed to draw an order on the Treasurer for the amount.

On motion of F. S. Thomas, the following standing rule was adopted:

"Applicants for membership shall obtain the signatures of the two members used as references to their applications, who shall be considered as recommending the applicant."

Dr. H. Gifford offered the following amendment to the Constitution and By-Laws, to-wit:

"The word December shall be stricken out of Sec. 1., Art. IV."

The following papers were read and cases exhibited:

1. Case—Bilateral Laceration of Cervix, F. A. Butler, Harvard, Neb.
2. Case—Acute Caries of Maxillary Bones, J. C. Emmert, Atlantic, Ia.
3. Opprobrium Medicorum, F. S. Thomas, Council Bluffs, Ia.
4. The Management of Strabismus, C. M. Hobby, Iowa City, Ia.
5. Transposition of Abdom. and Thorac. Viscera, etc., J. H. Cleaver, Council Bluffs, Ia.
6. La Conveuse Fuerst, A. S. v. Mansfelde, Ashland, Neb.
7. Notes on Surgical Cases, J. E. Summers, Jr., Omaha, Neb.
8. Case—Rabies Complicated with Strangulated Hernia, J. P. Lord Omaha, Neb.
9. Case—Phantom Pregnancy, E. S. Dailey, Omaha, Neb.
10. Aconitine and Veratrine, L. A. Merriam, Omaha, Neb.

11. Unruptured Hymen Cause of Lingering Labor, P. S. Leisenring, Omaha, Neb.
12. Case—Abscess of Lung, A. B. Sommers, Omaha, Neb.
13. Electricity in Gynecology with Cases, B. F. Crummer, Omaha, Neb.
14. New Method of Dressing after Cataract Extraction, H. G. Gifford, Omaha, Neb.
15. Case—Tumor of Perineum, W. F. Milroy, Omaha, Neb.
16. Case—Spondylitis, W. S. Ross, Omaha, Neb.
17. Case—Pyosalpynx with Specimen, A. F. Jonas, Omaha, Neb.
18. Clinic—Congenital Dislocation of Femur, by J. E. Summers, Jr., Omaha, Neb.
19. Clinic—Gastric Fistula, by J. B. Ralph, Omaha, Neb.

The following officers were elected to serve for the ensuing year:

J. M. Emmert, M. D., President.
P. S. Leisenring, M. D., First Vice-President.
M. L. Hildreth, M. D., Second Vice-President.
James Carter, M. D., Secretary.
T. B. Lacey, M. D., Treasurer.

The President appointed the following standing committees:

Committee of Arrangements—John M. Knott, A. C. Bergen, J. H. Cleaver.

Committee on Credentials—R. M. Stone, F. S. Thomas, J. E. Summers, Jr., W. F. Graham, H. S. Rogers.

Judicial Council—D. Macrae, J. H. Peabody, S. M. Harvey (new members to hold for two years), John Green, A. F. Jonas, J. B. Hatton (holding over for one year).

On motion of F. S. Thomas, Sioux City was selected as the next place of meeting, December 19, 1889.

Adjournment. JAMES CARTER, Secretary.

Reviews.

THE CENTURY DICTIONARY.

RECEIVED from Van Husen & Chapman, General Agents for Iowa, Nebraska and South Dakota, Sioux City, Iowa, the prospectus of the CENTURY DICTIONARY, an Encyclopedic Lexicon of the English Language, prepared under the supervision of William Dwight Whitney, Ph. D., LL. D., Professor of Comparative Philology and Sanskrit in Yale University. Published by the Century Company, New York.

The Century Dictionary is published exclusively by subscription and in twenty-four parts, or sections, the whole consisting of about 6,500 pages, to be finally bound in six quarto volumes. The cost is $2.50 a section. They will be delivered monthly, or four sections every four months, as desired by the subscriber. Subscriptions to the Dictionary are taken by agents, but since many persons may not wish to wait until an agent calls upon them, we will receive subscriptions sent directly to us, and will request the agents to supply the parts. If subscribers cannot be promptly reached in this way, we will send the parts directly from this office as they are issued.

What is said of the Century Dictionary:

This work has extraordinary prestige from the eminence of its editor-in-chief, Prof. W. D. Whitney, and his collaborators, and from its publishers. It has been in active preparation for seven years, and it is said that no American house has undertaken a work of greater magnitude or importance. There is certainly no American house which the public would more confidently expect to carry through such a work with honor. * * * However high expectations may have been raised, no book-lover will open this section without a glow of pleasure. It is the handsomest dictionary that ever was made. * * * We close this paper with the general judgment that the work, thus far, meets all reasonable expectations, and when completed it will be the most comprehensive and satisfactory book of general reference yet produced—a book which every one will want.—*Nation, New York.*

No more remarkable work of the kind has ever been produced, and in fullness and accuracy of information, none has ever equalled it.—*School Journal, New York.*

One of the monumental literary works of this century.—*Boston Traveller.*

As a whole, the work is the most remarkable ever undertaken in this country—a monument of American enterprise, intelligence, skill and culture worthy of this centennial year.—*Critic, New York.*

Beyond doubt, the greatest work of the kind ever attempted in the English language.—*Post, Washington, D. C.*

This latest American publication cannot fail to be accepted as a standard authority in the mother country, as in America. It is as accurate, comprehensive and complete as care, labor and scholarship can make it. * * * The spelling in the Century Dictionary brings the long and unsatisfactory contest between Webster and Worcester to a satisfactory close. * * * No more complete, more sumptuous, and more beautifully illustrated work of this kind has been seen this century.—*Press, New York.*

Judged by this first part, it must be pronounced likely to be, when finished, not only the best English dictionary ever published, but so good that it is not likely to be improved upon for at least a generation.—*Examiner, New York.*

An important event in the history of American scholarship. Long anticipated and waited for it will be found more than worthy of the promises in regard to its quality, and excelling all expectations of fine workmanship. It is not only a word book of the most complete kind, but an art book. * * * That the greatest dictionary of the English language is the work of Americans would have surprised old Samuel Johnson, but American scholarship has won such a favorable renown, that no one to-day would be aroused to astonishment at one more evidence of its capability.—*Boston Journal.*

The object teaching system upon which it has been compiled will delight the mind as well as the eye of the jaded reader of these days—or of the business man who has no time to become jaded with reading;—but the admirable pictures, which thus give an instantaneous knowledge of a superficial sort, should not be allowed to distract him from the vast labor involved in the vocabulary, in the history, spelling, definition and pronounciation that compose it. In these, as in the former respects, it far transcends the hitherto unequalled illustrated quarto dictionaries.—*Brooklyn Eagle.*

In this first section, we find the promise fulfilled of all that was claimed for the work. From "A" to "Appetency," the story of each word is written out in full, and the illustrations, never overshadowing the text, always aid the definitions. The Century Dictionary is surely one of the most notable literary undertakings of the age.—*Press. Philadelphia.*

It will unquestionably occupy a place far above any other work of its kind in the English language.—*Transcript, Boston.*

* * * The virtue which chiefly recommends it is its comprehensiveness. Next to this is the thoroughness of the philological research upon which its etymologies rest. These two features alone are enough to put it far

above all other dictionaries, and to secure for it a position of indispensableness. * * * It has had a master mind to guide and control it, and its magnitude is made valuable by the precise direction and completion of every detail. * * * The CENTURY is a technical as well as an ordinary dictionary, and in that feature it stands without a rival. * * * Add the decided merit of a beautifully clear and symmetrically arranged and graded typography, and we have an American dictionary of which any nation might be proud; which will take rank in the very front of lexicographic works, and which reflects honor upon the editors, contributors, illustrators, and publishers.—*Tribune, New York.*

This superb work may almost be said to mark an era in book making as well as in dictionary-making. Its page is perfect; form, column, type and illustrations leave nothing to be desired. The necessary cost of this work—$2.50 for each of the twenty-four sections—ought not to debar it from entrance into the homes of people of moderate means. Its value is so great that it is well worth the cost of a considerable self-denial. —*Evangelist, New York.*

It will win the approval of all who have progressive ideas with regard to works of reference, and who are capable of appreciating a dictionary that strives for and attains a high standard of excellence.—*Telegraph, Philadelphia.*

This promises to be the most comprehensive work of its kind in the English language. * * * In typographical appearance and finish the book has no equal in its class.—*New York Herald.*

The first part, in all its beauty and completeness, gives every evidence of a book that will satisfy the English-speaking scholars of the world for a whole generation to come.—*Inter-Ocean Chicago.*

Perhaps the most valuable feature of THE CENTURY DICTIONARY is found in its encyclopedic character. Distributed under individual words and phrases occurring in the regular alphabetical order, a marvelous amount of valuable information, not easily accessible elsewhere, is made available.—*Commercial Advertiser, Buffalo, N. Y.*

Mechanically, the new CENTURY DICTIONARY is the most perfect ever made. A great variety of type is the salient characteristic of its pages, and the gain in clearness thus made is greater than can be described. Typographically, the work is one of exceptional beauty, and the wood-cuts are of a quality altogether superior to anything heretofore offered in works of this description. Such engravings as, for example, those of the Athenian acropolis, and of the great auk, in the section before us, are good enough for the pages of the most fastidious magazine or work of general literature.—*Chicago Journal.*

It is extensive, reasonable in its assertions, and consistent in its rules. In its comprehensiveness and completeness, there has never been any dictionary to equal or compare with it. Nothing relative to such a work has been overlooked; and the many specialists who have furnished material for the various departments are vouchers for its correctness. The make-up is excellent in style, the binding durable and neat, the typography clear and attractive to the eye, the pictorial illustrations full of suggestiveness and artistic merit. The arrangement is characterized by its simplicity.—*Chautauquan.*

THE CENTURY DICTIONARY, to our mind, is an epoch-marking, if not an epoch-making, work. Its originality of design, no less than the splendor of scholarship showered upon it, and the marvelous patience it represents, makes it a literary event of all but the supreme rank. If, sometimes, we feel called upon to lament the dearth of literary productions just at present, we may find solace in the appearance of this masterly work, destined to be of classic rank and permanent influence.—*Commercial Advertiser, New York.*

WOODS' MEDICAL AND SURGICAL MONOGRAPHS, May, 1889. Price, $1.00. Contents: On the Preventive Treatment of Calculus and the Use of Solvents, By Sir Henry Thompson, F. R. C. S., M. D.; Sprains, Their Consequences and Treatment, By C. W. Mansell Moullin, M. A., M. D. Published by Wm. Wood & Co., 56 and 58 Lafayette Place, New York.

This most excellent monograph contains an excellent and careful treatment of the subjects mentioned in the contents. Anything from the pen of Sir Henry Thompson carries with it the weight of authority based upon a long life of activity, accurate observation, critical analysis, and keen judgment. The article on sprains is alone worth more than the small sum asked for the work. We can sincerely recommend the book to the careful perusal of our readers.

OPHTHALMOLOGY AND OPHTHALMOSCOPY FOR PRACTITIONERS AND STUDENTS OF MEDICINE. By Dr. Hermann Schmitt-Pimpler, Professor of Ophthalmology and Dirctor of the Ophthalmological Clinic in Mearburg; Translated from the Third German Revised Edition. Edited by D. B. St. John Roosa, M. D., LL.D., Professor of Diseases of the Eye and Ear in the New York Post-Graduate Medical School; Surgeon to the Manhatton Eye and Ear Hospital. One hundred and eighty-three wood cuts and three colored plates. New York: William Wood & Co., 56 and 58 Lafayette Place, 1889.

The first edition of this work was issued in 1884. So great was its popularity in Germany that a second was issued in 1886 and a third in 1887. This English translation could not have been committed to better hands than St. John Roosa, nor the publication to a better house than Wm. Wood & Co. The execution of the work is all that could be desired. As a work of reference it is complete, its 571 pages containing all the material needful to be known on this specialty up to present date.

Medical Progress.

ALT: ON THE EXCRETION INTO THE STOMACH OF MORPHINE INJECTED SUBCUTANEOUSLY.—(*Berlin Klin., Wochenschrift, '89, 25.*) Some years ago Hitzig noticed that when a dog vomited in consequence of subcutaneous injections of morphine, and the vomit was licked up by another dog, the latter also vomited soon after. This observation led to an investigation of the subject by his assistant Alt, with results of some practical importance, which are summed up as follows: (1) After the hypodermic injections of morphine the alkaloid is excreted into the stomach. (2) The excretion can be detected 2½ minutes after the injection; continues plainly for half an hour, then becomes weaker, and ceases altogether after 50 or 60 minutes.

The nausea occurs only after the appearance of the alkaloid in the stomach, and can be avoided by washing out the stomach. (4) The amount of morphine excreted into the stomach reaches the neighborhood of half the amount injected. (5) By repeatedly washing out the stomach the constitutional symptoms can be much reduced; in this way dogs can be made to bear doses otherwise certainly fatal. All the preceding has been proved with certainty only on dogs; but on human beings also the author has shown that morphine injected hypodermically appears in the stomach in much the same way, and that washing out the stomach diminishes its effects. It follows from this that, in hypodermic morphine poisoning, the stomach should be washed out with the same care as if the dose had been taken by the mouth; also that in medicolegal cases of suspected poisoning by hypodermic injection, the alkaloid must be searched for in the stomach as well as in the blood.

Heidenhain: On the Causes of Local Recurrence of Carcinoma After Amputation of the Breast.—(*Report of the 18th German Surgical Congress.*)—The microscopic examination of a number of amputated breasts has shown Heidenhain, that recurrence was to be expected in many cases where the separating cut was made in macroscopically normal tissue, and in most of these cases the events justified the prediction. The causes of frequent recurrence are thus summed up: (1) The fascia pectoralis is extraordinarily thin and very ill-defined in its limits, especially in corpulent women, so that even on the cadaver it is impossible to separate it from the muscle without leaving shreds of connective tissue on the latter, unless we also remove a thin sheet of muscle with it. (2) In thin women throughout, and in fat women at points, the gland is so closely connected with fascia and muscle, in extirpating it small particles are very easily left behind. (3) Every mammary gland which contains a carcinomatous nodule, is to a large extent, and perhaps in toto diseased; the epithelial cells of the acini proliferate along with the growth of peri-acinous connective tissue. The cancer nodule is found where the degeneration has progressed farthest. Perhaps the part of the late recurrences start from proliferating acini left in the wound. (4) In the retro-mammary fat there occur lymph-vessels leading to the fascia pectoralis. In two-thirds of the cases of mammary cancer numerous metestases are found in these lymph-vessels. Along these channels the carcinomatous growth proceeds so rapidly that a carcinoma, still freely movable on the muscle surface, generally reaches, microscopically, clear to the surface of the muscle. (5) The pectoralis major is, as a rule, healthy when the tumor is freely movable upon it. It becomes diseased when a cancer-nodule in the fascia breaks through into it, or when the main tumor attacks it through contiguity. The cancer cells are probably spread through the muscle by way of the lymph-channels, penetrating from these between the fibrillæ. Probably the contractions of the muscle draw the cells into it with the lymph-stream. Reasoning from these premises the author recommends, in operating for movable carcinoma, to remove with the gland a thin sheet from the surface of the underlying muscle, being careful to cut vessels below the surface of the muscle, as they are generally accompanied into the retro-mammary fascia by carcinomatous lymph-vessels. In case the tumor is fast to the muscle, the author advises extirpating the entire pectoralis major, separating tendon and periosteum at the external and clavicular attachments. In such cases the microscope has shown the apparently normal muscle tissue to be full of minute cancer-nodules, and the statistics of operations for tumors grown to the muscle are extraordinarily bad. Out of 65 cases from the clinics of Volkmann, Kuster and Helferich but 2-3 per cent. were permanently cured. By removing the entire mucle, one not only gets rid of an immense number of infected lymph-channels, but give very free access to the auxillary glands. The functional disturbances from the loss of the muscle is hardly to be noted.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

Dr. J. E. Summers, Jr.,
208 So. Fifteenth Street, Omaha, Neb.

galvanization, with four freshly charged cells (afterwards five), was practised nightly for three months, varied at times by the production of anelectrotonus. Occasionally sedatives were given as required. The galvanization produced some immediate temporary relief. His condition improved somewhat, and on the tenth night, after beginning the galvanization (a blister having also been applied the morning previous), he slept all night without having taken a sedative. The insomnia became less a factor after this. He was usually able to sleep some each night, although three, four and five nights in succession were spent at various times with very little sleep. These sleepless nights could always be traced to unusual excitement the day preceeding. The headache and other symptoms were not much relieved. The administration of Bonjean's ergotin was now begun and continued six weeks, in addition to the treatment just now mentioned. All the symptoms now gradually, slowly but surely, improved.

About the middle of January he began to go out riding occasionally. From the middle of February he went out of the house daily, and went riding every nice day.

After March 20th he came to the office daily for galvanic treatment, and about the middle of April treatment of every kind was discontinued. He now feels strong, eats and sleeps well, does not average headache once a week, is able to concentrate his mind on any subject as much as a "gentleman of leisure," which is his present vocation, need to.

The excitement of passing events has no deleterious effect on his head or heart, and it is believed that in six months he may safely resume his practice.

In conclusion it may be said that this case is not presented to show the peculiar value of any line of treatment adopted, but to illustrate a type of cases that tax the patience, knowledge and ingenuity of the physician to the utmost.

MY MALPRACTICE CASE AND WHAT BECAME OF IT.—AN EXPERIENCE.

By M. V. B. Clark, M. D., Sutton, Neb.

Civil malpractice suits are usually conceived in malice, develop through jealousy and come forth into the world in the lowest kind of spite. Such was the inspiration, growth and birth of the one against me.

The occasion was presented by my having an incomplete Potts fracture left leg, on a German boy of seven years of age. It was about two and one-half inches above the ankle, resulting from a forcible kick of a horse, from without inward.

The lad was by inheritance excessively nervous, irritable, and altogether, unmanageable beyond description. I applied a temporary dressing, hoping for the great swelling and the boy's excessive nervous condition to subside, and on the fifth day applied a fixed dressing — notwithstanding the yet great swelling—with proper bandaging. This, the boy caused, in my absence, to be at once removed, and he was allowed to have his own way in every respect; he was not put under the least restraint whatever. This was the time when I should, in the presence of a trusted assistant or some solid friend, have withdrawn entirely from the case. I protested and threatened, but unluckily not before a trusted friend, each day applying the dressings anew; which were as often loosened, when I would be gone.

In about four weeks I removed the dressings, and upon careful examination, found a result free from anchylosis, shortening or lameness. There was present a slight curvature, inward, having the effect to erect the foot.

Now commenced my troubles and heartaches, and when it dawned on my mind that I had not taken, at any time in the history of the case, an assistant or good friend for a witness, who would tell the truth, I felt indeed that I was cast into the *slough of despond*. The whole Dutch outfit was jumping on me with both feet, and it can be easily imagined that I felt fully the seriousness of the situation. From their threatenings I imagined everything would come upon me—possibly criminal malpractice as well as civil—as they had everything in their own hands, and would swear the case straight through regardless of the truth. Mentally, from now on, my days were dark and in the shadow; my nights were sleepless, and lurid with visions of the sheriff coming up the path to take me dead or alive, and I thought I must certainly be guilty of some terrible crime.

By and by I awoke out of this, and my way seemed clear. I reasoned to myself that this, at its worst, is not so very bad after all, and God knows that even of this I am innocent, although I may not be able to prove it. All there is in this case is a curvature, I reasoned, and then plucked up courage and went to my patient and offered to re-bend the leg into position. That they objected to, so I prevailed on them to let me accomplish the straightening by the application of a bow-leg apparatus, and applied a temporary splint so arranged as to gently but persistently spring the curvature into a straight line, leaving word to have the boy brought to my office and be measured for a regular bow-leg apparatus.

The father sent for another physician, a competitor of mine, who on a thorough investigation of the case advised and sent for a Tieman's bow-leg straightener. This was a full endorsement of my treatment and procedure in the case.

This had been in position on the leg a week or more, and was slowly but surely accomplishing the reduction of the curvature, when like an evil spirit, along came a scalawag Swede doctor by the name of Atelson, who persuaded the family to throw aside the bow-leg apparatus and have me sued for damages, which was to be divided between the doctor and patient; the doctor to help swear the case through.

At Hastings was found a lawyer so low down in the profession and lost to all honor, who made out the necessary papers, and in due time I was sued for the very modest sum of $20,000 damages. Hays, the lawyer, had, when he left our county, been given twenty-four hours to leave in, for some infamy. After a time, he drifted to Oberlin, Kansas, and for some villany was debarred from practice.

The vagrant scoundrel Doctor has no fixed abode, but floats between Nebraska and Kansas, is a dead-beat generally, and I caution all respectable people to give both the lawyer and doctor a wide berth, who so greatly wronged me.

Then came the engagement of attorneys for defense, who bled me to the tune of $100, merely for a retainer, so they said. I was meek, and paid it willingly, and got off cheap, so they told me, and I of course believed everything they said.

On the first day my case was called I got an order of the court to examine the case with three disinterested surgeons for the purpose of determining the amount of disability if any existed. On my first trial to get an examination the boy was secreted, and we were refused an examination. At length an examination was had, when careful drawings were made of both legs so as to determine, relatively, the amount of curvature. Subsequent examinations showed considerable progress in nature's effort and the boy's growth toward an obliteration of the curvature, so much so, it was easy to calculate that in time it would be completely gone.

Twice we were ready for trial, but the plaintiff wavered and held off. Meantime, a farm-hand, who had some trouble with the father about his wages, came to me of his own accord and offered to testify that he had heard the father tell the boy to limp always when he came anywhere near where I was. Here was blackmail, and I had this evidence secured as a deposition in the case. This evidence showed that the boy when at home could run and jump and was in every way an active lad.

After numerous continuances by the plaintiff, he on his own motion, had the case dismissed at his own cost.

I must acknowledge priceless aid and encouragement in my difficulties by Drs. Kendall, Hart and Wilcox, members of this society, and Dr. Howard, of Harvard.

Thus will it be seen that this suit was brought maliciously, and as a matter of protection this society should take steps to have a law placed on our statutes to prevent the repetition of such in the future, and I most respectfully recommend that our Committee on Legislation prepare a bill to be presented to the next legislature embodying the New York law to prevent speculative malpractice suits, the main feature of which requires that before suits for damages be begun bonds be given equal to twice the amount claimed, as damages to indemnify parties where the suits are lost or dismissed, and who have suffered either in pocket or reputation.

SOME POINTS IN THE PATHOLOGY AND TREATMENT OF GONORRHŒAL CONJUNCTIVITIS.

By H. Gifford, M. D., Omaha.

I have chosen this subject because the disease in question is one which must, in the country and smaller towns at least, be treated by the general practitioner, and because the proper treatment, which is of the utmost importance, requires attention to minute details which the text-books do not fully give.

That the scope of the subject may be better understood, let me remind you at the outset that the great majority of cases of *ophthalmia neonatorum* are due to gonorrhœal infection. In women gonorrhœa often runs as insidious and protracted a course as in men, and is even more likely to be neglected. A slight gleet of the cervix may continue for years, most of the time causing no inconvenience, but becoming worse toward the end of successive pregnancies just in time to effect the baby's eyes. I have one woman in mind who has had three babes in succession suffer with gonorrhœal ophthalmia, without the husband meanwhile having cause to complain.

With regard to the etiology, the gonococcus of Neisser has been demonstrated by Bumm, with practical certainty, to be the cause. He has cultivated the germs outside the body, and has by inoculation with a culture from gonorrhœal conjunctivitis produced a typical gonorrhœa of the female urethra. Other species of cocci of precisely similar form occur in the vaginal and urethral secretions, but these can be distinguished from the gonococci by their reactions toward staining agents, and by not occurring in the cell substance to anything like the extent that the gonococcus does.

The microscopic test is commonly unnecessary for clinical purposes. The diagnosis can generally be made by the history and microscopic appearances alone. But cases do occur where the positive diagnosis can be made only with the aid of the microscope, and while it might make little difference in the treatment of a given case whether gonococci were found or not in the pus, circumstances may make every bit of evidence as to the etiology, of importance for legal purposes. As an instance, a girl of eleven years of age was sent me last winter for a severe inflammation of the conjunctiva which had been running some weeks and had already destroyed the sight of one eye. On account of the girl's age no suspicion of a specific cause had been aroused. I found the child to have gonorrhœa both of the conjunctiva and the vagina, and close questioning elicited the fact that she had been the subject of an attempted rape a month or so before. The man, who was a laborer on the father's farm, was arrested, and on being confronted with the evidence, confessed, and is now, if I mistake not, in the penitentiary.

The microscopic test is more simple than that for tubercle bacilli. A bit of pus is spread out thin and dried on a cover-glass in the ordinary way; a few drops of a saturated watery solution of methyl-blue are then filtered and the cover-glass floated on the liquid for a few minutes, then washed off for a minute in water or glycerine or dried and mounted in balsam. To be certain that a given specimen contains gonococci, the following characteristics must be noted: (1) The cocci never occur in chains but always in groups of pairs, each individual having under a high power something the shape of a side view of a coffee-bean. The number of individuals is always divisible by two, and generally by four. (2) The majority of the germs occur in the protoplasm of the pus cells, the number in a single cell varying from a few pairs to a perfect swarm so that the cell seems ready to burst. (3) The number of cocci must always be considerable. Where, in a whole specimen, only an occasional group of diplococci can be found after long searching, even if they lie in the cells, the microscopic diagnosis cannot be considered. For clinical purposes, the foregoing characteristics are sufficient; when, however, for legal purposes, it is desired to employ every possible means of identification, Gram's method of staining must be used. This process stains most bacteria a deep blue, but leaves the gonococci entirely unstained.

Our knowledge of the microscopic pathology of the disease we owe, chiefly, to Bumm who has followed its progress from day to day in the gonorrhœal conjunctivitis of infants. He has found that, at the onset, the cocci penetrate rapidly between the cells of the conjunctival columnar epithelium, and multiply in the superficial layers of the underlying connective tissue. Under the influence of the irritation which they produce, immense quantities of leucocytes gather, and taking up the germs in their substance, carry them again to the surface, in this way freeing the subepithelial tissues of their presence. The columnar epithelium having meanwhile broken down, a new cell-formation resembling pavement epithelium takes its place. Through this the cocci seem to be unable to penetrate, and their further growth goes on only on the surface and in the secretions. If, however, the new pavement epithelium is in any way destroyed, the germs may again penetrate into the deeper tissues, and thus cause a relapse of the inflammation.

With regard to treatment, the prophylaxis is of prime importance. How important it is we can appreciate only by recalling the fact that in the blind asylums of Germany, more than one-third of the inmates are victims of ophthalmia neonatorum, nearly all of which could have been prevented with proper management. In adults, the proper prophylactic measures are self-evident, and it must be exceedingly rare that cases occur through want of proper warning from the physician; but with new-borns I am compelled to think that culpable neglect often occurs. All are familiar with the results of Credes measures, which in the German lying-in hospitals have reduced the proportion of ophthalmia neonatorum from 10 to 20 per cent. to a small fraction of one per cent.; but I am led to think that many practitioners fail to make a systematic practice of inquiring after the presence of even a slight leucorrhœa before confinement, and in case of its presence, of taking special precautions to prevent infection of the eyes. Credes method consists in washing the outer surface of the lids with clear water as soon as the child is born, and then dropping a single drop of a two per cent. solution of nitrate of silver on the centre of each cornea. Others claim, from large experience, that equally good results are obtained if the silver be omitted and the lids carefully cleaned as soon as the head is born. As the use of silver causes some irritation, and is liable occasionally to excite unpleasant suspicions, the following seems to me the most advisable routine for private practice: Where there is absolutely no history of leucorrhœa, the lids should be cleansed as soon as possible, clear up to the roots of the lashes with soft cloth moistened in clean water, being careful always to wipe away from the palpebral fissure. If a leucorrhœa, whether specific or not, is known to exist, in addition to the above, the lids should be well scrubbed with a swab wet in a two per cent. solution of silver and a drop of the same be dropped upon each cornea. The application of the nitrate of silver to the exterior of the lids is a slight addition to Credes method, which I have adopted to give greater surety, as silver is one of the very best antiseptics, and in a two per cent. solution destroys pus germs almost instantaneously.

When on seeing a case for the first time we find one eye apparently unaffected, the indications are two-fold: First, to kill any germs that may possibly have gotten into the apparently well eye, but have not yet had time to develop; second, to prevent any subsequent infection from the affected eye. The first indication seems to have been hitherto neglected. The text books simply say to close up the second eye at once. Where this is done we often find, the next day, that the eye has a well started gonorrhœa, and requires the same treatment and is subject to the same danger as the other.

Now it seems rational to take the same precautions with the one apparently unaffected eye in such a case, as one does with both eyes of a new-born from a gonorrhœal mother. If dropping nitrate of silver into an eye which has just been infected, or has upon the lids a minute speck of infectious pus, has the effect which the results of Credes method seem to indicate, we should certainly give the unaffected eye the chance of benefit which its use may bring in cases where one eye is already inflamed.

Where a gonorrhœa is once fairly started, I have no faith whatever in any abortive treatment. The work of Bumm, already referred to, shows that the cocci burrow under the epithelium so as to be out of the way of antiseptic measures that do not begin with the destruction of the epithelium; but in a case where the second eye seems perfectly healthy, the germs may have been introduced but a moment before the physician sees it, so that if energetic measures be adopted before they have time to multiply and penetrate the epithelium, the development of the disease may possibly be prevented.

In all such cases, therefore, before closing the second eye, I should take the same precautions, only more energetically, that I would take with a new-born from an infected mother. The skin of the lids is first cleansed with a moist cloth and then well scrubbed with a swab of cotton, rolled on a match, wet with a 2 per cent. silver solution, rubbing it well into the roots of the lashes, and paying particular attention to the skin around the inner canthus, for that is the region to which the infecting finger is most commonly applied; then with the lower lid pulled slightly away from the ball, two drops of the silver solution are dropped on the caruncle at the inner angle, and the head turned so as to let the liquid flow slowly through the lower cul-de-sac to the outer canthus; then with the patient lying so as to bring the upper lid below the level of the lower, the same is repeated with the upper half of the conjunctiva. The eye is then closed without further wiping and the collodion seal, hereafter described, applied. This disinfection can be done more thoroughly if the eye be first cocainized, because the tears flow less freely and the silver is not so quickly diluted and washed away.

The second indication is then best fulfilled in an infant by at once hermetically closing the good eye with a pad of absorbent cotton, reaching out to the bridge of the nose and up to the forehead. The whole outer surface of this is then covered with several layers of collodion, and the edges particularly and carefully fastened down. The gauze covering to the cotton, commonly recommended by the books, is unnecessary. New-borns cannot remove such a seal, but with unruly children of greater age a tight bandage in addition is often required, or it may become necessary to tie the hands unless the child can be constantly watched. In older children and adults, it is advisable to fasten a watch-glass between two layers of thin cheese-cloth, which are then pasted to the skin at the edges, except at the temporal side, where it is well to leave an opening to prevent the moisture from gathering on the inner surface of the watch glass. This seal should be removed after twenty-four hours or sooner if the eye looks in the least suspicious when it is first put on, to be sure that no infection is developing. It should be removed every day as long as any excessive discharge continues from the first eye, and a bottle of collodion should be left with the nurse to use in case the seal should require repairing at any point.

Finally, as to the curative treatment, you all know that cleanliness, cold and nitrate of silver are the main stays, and I have no new remedies to offer. I write simply to insist on thoroughness in the methods of using the old ones. Regarding cleanliness, the eye should be cleansed every half hour, night and day, with a three per cent. solution of boracic acid as long as the secretion is profuse, the length of the intervals between cleansings increasing with the decrease of the discharge. Cold in the form of iced compresses should be used continuously, night and day, from the beginning, as long as the reaction is high and the lids tense and hot externally. As soon as the swelling begins to subside under the use of silver, the ice may be discontinued except for an hour or two after the treatment of the lids each day. The best way to get the full effect of the cold without undue pressure on the lids is to have a large cake of ice on which about a dozen pads of four thicknesses of thin cotton cloth are spread out. These are applied in rotation, making the change as often as is necessary to keep the lids quite cold. With patients old enough to make themselves understood their own feelings are a good guide in using the ice. If they complain of the eyes feeling too cold do not change the pads so often; but during the first two or three days, with hot, swollen lids, it is generally well to change the pads every minute. They should be put on so as to apply closely to the entire outer surface of the lids. Unless specially instructed on this point nurses are apt to leave a considerable portion of the lids, at the inner angle, untouched by the pads.

Now as to the use of silver. Just when to begin with it is often hard to decide. If we begin too soon we may do harm, if too late, we may lose the chance of saving an eye. Never begin so long as the inflammation is very intense and the discharge scanty and serous. On the average, it is safe to begin on the third day after the outbreak. In general practice it is well to begin with a two per cent. solution of silver, and if this does not have a prompt and lasting effect, *i. e.*, if on the next day we do not find the discharge and the swelling decreased use a four per cent. solution instead. Of more importance than the strength of the solution is the way it is used, and proper use means simply thorough use. The whole surface of the retrotarsal folds must be reached in order to get the best results. This is hard to do. Simply to evert a new-born's upper lid, and keep it everted, is no very easy matter for one not in practice. The lashes are too short to be of any use, and the tip of the finger covered with dry cotton should be inserted under the edge of the tarsus, and the latter held firmly back against the brow. If it is not possible to get at the folds in any other way, chloroform should be given, and the folds brought clearly into view with the aid of forceps or a fine hook. This is of course seldom necessary in infants, but with large children and adults, where the disease drags on in spite of applications in the ordinary way, a single thorough dose of this kind will often effect a radical change. Each lid should be turned separately and the solution applied with a loose swab of cotton.

If a two per cent. solution be used washing off is unnecessary, but stronger solutions should be washed off with a one-half per cent. solution of salt. The applications should as a rule be made once in twenty-four hours. If at any time the cornea begins to ulcerate, no time should be lost in using the only resource left us to make our treatment more effective; a canthotomy should be made, the skin and muscle at the outer commissure being cut down to the edge of the orbit with strong, blunt-pointed scissors. This operation acts beneficially in three ways: (1) It relieves congestion. (2) It relieves the pressure of the upper lid upon the cornea. (3) Most important of all, it enables the lids to be so completely everted that the thoroughest possible application of the silver to the recesses of the conjunctival sac can be made. In these cases, and many others, I use instead of solutions the mitigated stick, three parts of nitrate of potash to one of nitrate of silver; it is more apt to be effective than the solutions and can be used by any one who has had any experience in treating lids. The ulceration and destruction of the cornea is of course the great danger in the disease, and for it, directly, we use no remedy, we influence it only by treating the conjunctiva. Hence the necessity of the canthotomy and of renewed energy in the cauterization, when the cornea is threatened. As the discharge decreases the strength of the solution can be reduced, from four per cent., if that has been used, to two per cent., and finally the patient can be discharged with a two grains to the ounce solution to be dropped into the eye once a day until the discharge has ceased.

The prognosis varies with the age of the patient. I have never seen the cornea injured in a case of ophthalmia neonatorum which was treated properly from the first, and am naturally inclined to think with Knapp, that such injury is avoidable. In adults and older children the danger is far greater, and in spite of the utmost care and the use of every means at our disposal, serious injury to the cornea will sometimes occur.

[In the discussion of this paper I was made aware that I had, unintentionally, given an exaggerated impression of the dangers of ophthalmia neonatorum. In infants gonorrhœa of the lids runs, on the average, a comparatively mild course, and many cases, perhaps the majority, would recover with cleanliness alone. The radical measures mentioned in the paper are rarely called for except in adults. . Still, the fact that one-third the inmates of blind asylums in Germany are victims of ophthalmia neonatorum shows that we cannot afford to neglect any given case.]

INSUFFICIENCY OF OCULAR MUSCLES AS A CAUSE OF CHOREA AND EPILSEPSY.

By D. C. Bryant, M. D., Omaha.

Thirteen years ago when Dr. George T. Stevens, of New York, read a paper on the relationship existing between errors of refraction and chorea. he provoked a smile of incredulity rather than any feeling of belief among members of the medical profession.

This feeling of unbelief was rather increased, shortly afterward, by the appearance of a paper on the same subject, written by Dr. C. S. Bull, in which Dr. Stevens' ideas and beliefs were strongly opposed and to some extent ridiculed. From that time little had been published, in regard to the matter, until about three years ago, when Dr. Stevens began publishing a report of a large number of cases of chorea and epilepsy, in which he had traced the exciting cause to errors of refraction and want of balance, or insufficiency of some of the recti muscles, and in which, by removing the cause, he had succeeded in producing a permanent cure, without the employment of a single dose of medicine.

This was followed, last year, by Dr. David Webster publishing a list of cases where patients, suffering from migraine and chorea, were cured by a partial tenotomy of one or more of the eye muscles to remove a want of balance which had previously existed. And then, last summer, was added more testimony, to the already accumulated evidence, in the shape of a work on nervous diseases written by Ambrose L. Ranney in which he strongly supports Dr. Stevens' ideas, and says that he has not in his practice in the past three years met with a case of chorea or epilepsy in which he has failed to find either an error of refraction or an insufficiency of some of the eye muscles.

Situated as we are, here in the west, far from large hospitals and crowded clinics, such as our eastern brethren enjoy, and, for the most part, not possessors of large fortunes, inherited or acquired, with which to prosecute investigation or experiments, we cannot expect to often have the pleasure of leading them in matters of original investigation, but we can have the satisfaction of either verifying or proving false some of the theories they may advance.

During the past six months it has been my good fortune to have two typical cases, one of chorea and the other epilepsy, fall under my care on account of eye troubles. On these I determined to embrace the opportunity I had been so long waiting for, of ascertaining for myself and from my own experience some of the truth or fallacy of Dr. Stevens' theories. In these cases, as will be seen by the following report, the error of refraction and insufficiency of the muscles, which Dr. Ranney says existed in all of his cases, was readily found, and the result from the correction of these troubles was all that the most enthusiastic crank could desire.

Case. 1.—A. M., a boy of nine years of age was brought to me by his father, through the advice of his family physician, to have a squint corrected, which the parent said had been noticeable for two years past, although he thought it had not become a permanent thing until about three months before he was brought to me.

At this time, though permanent, it was still an alternating squint, the right eye being used the greater part of the time.

On examination I found a high degree of hyperopia in both eyes; that in the right being three dioptries, and that of the left, four. This error of refraction had been corrected, with glasses, by another oculist, some six weeks before, and the vision brought up to 20-20 in the right, and 20-30 in the left eye; this evidently having suffered to some extent from non-use.

This boy was a subject of chorea of the medium type which had existed for over three years. The muscles of his face seemed never to be at rest, while those of the upper extremity were more or less constantly in motion. I do not think the muscles of the lower limbs were affected in this case, at least I noticed no trouble there at either the times I saw him before operating.

I learned from the father that the child had been treated for his St. Vitus dance by an intelligent and conscientious physician for several months with no permanent benefit. At this time, however, he had taken no remedy for over six months. On the 15th of November last I did a partial tenotomy of the internal rectus of the left eye and three days after a similar operation was done on the internal rectus of the right.

From the day of the last operation his chorea ceased. Out of the ten or fifteen times that I have seen the lad since the last tenotomy I have not been able to discover any choreic movement or jerking of his muscles, and the parents report him entirely cured.

Case 2.—This case is of peculiar interest, being that of a young man, twenty-one years of age, who came to me last fall suffering from a chronic granular conjunctivitis and ulceration of both corneæ. The trouble with his lids had been of three or four years duration, and he had spent all the funds that he and his parents could raise in having them treated, but with no permanent improvement following, probably, on account of his inability to continue treatment for a long enough period at any one time.

He was admitted to the charity ward, under my care, at St. Joseph's hospital. Here he had been treated but a short time when one day as he was being treated he was seized with an epileptic fit. He recovered consciousness in a few minutes, and then on being questioned, told me that he had been subject to these attacks for the past twelve years. There was one peculiar feature in his case that is not common in the male subject, and that was the recurrence of the epileptic seizures at a certain time each month. This period would last for three or four days, during which time he would have a dozen or fifteen fits. After this there would be no return of the trouble until the same time the following month.

This man was not of an effeminate make-up, as might be surmised from the foregoing history, but was of sturdy build and heavily bearded, for one of his age. His trouble had been gradually growing worse, both in regard to the number and violence of the fits.

Here was another case for which I had been waiting, and now I impatiently waited for his eyes to improve enough so that both the refraction and the strength of the ocular muscles could be tested with anything like a satisfactory or correct result. During the latter part of March I attempted to test his vision and find out what, if any, error of refraction existed, and also the nature and amount of trouble there might be with the muscles. On account of the opacities of the corneæ, it was impossible to arrive at any definite conclusion in regard to the exact amount of error of refraction, but that there existed a high degree of myopia was readily ascertained.

On testing the muscles an insufficiency of the internal recti muscles was found to exist, which required a prism of eight degrees to overcome, when eyes were tested with light at twenty feet. On the next day I did a partial tenotomy, of the left external rectus, which did away with half the trouble, so that a prism of four degrees enabled the patient to fuse the images, when tested at the same distance as before. Five days after this the tendon to the right external rectus, was partly divided, which apparently fully corrected the muscular trouble; I say apparently, as it was afterward found that the correction was apparent and not real.

As, in two days now, it would be time for the return of his fits, I waited anxiously to see what the result would be. The patient was taking no medicine except a little quinine which he took, for a few days, for malarial trouble. The time for the fits to commence arrived, and day after day passed by, until ten, twelve, fourteen days had passed, and no sign of a recurrence of the seizures had been noticed, except that the patient said that, one day, he felt like having a fit but did not. I had about concluded that the "tenotomy" was a sure cure, when, on the fifteenth day, from the time the trouble should have commenced, he had two light attacks but did not lose consciousness. On the following day he had two more, making in all, four, instead of twelve or fifteen, as he had been having at one of these periods.

Although I could see some improvement in the reduction of the number and severity of the fits, and also the postponement of the time for two weeks, still, I must confess that my ardor was somewhat cooled by their return. However, I determined to follow out Dr. Ranney's ideas fully, and as he says in his recent work that more, or, as he calls it, latent, insufficiency becomes manifest often after correcting what is apparent, I tested the patient's muscles the next day after his last fit, and found that now it needed a prism of three degrees to allow him to fuse the images readily.

Accordingly, on the next day, another partial tenotomy was done on the left external rectus, which again corrected the want of balance. Whether or not another operation will be necessary after a time remains to be seen.

It has now been six weeks since the last operation, and there has been no return of the fits, and although we cannot say that he is cured, yet beyond the shadow of a doubt he has been greatly benefitted. In reporting these cases, the only thing I have to regret is that the number is so limited. In themselves they could prove nothing, but, being such typical cases of both diseases, and the improvement so marked in both cases, they certainly add a little more evidence to the idea, so strongly urged by Drs. Stevens and Ranney, that want of balance of the eye-muscles is often the prime cause of both chorea and epilepsy.

But some may say that time enough has not elapsed for any decision in regard to a permanent cure to be reached in these cases. That is very true, and they are not brought forward as examples of radical cure, but the history of each is given for what it is worth. The marked benefit cannot be disputed, and when we obtain benefit from a drug in any given case we think it good evidence that it is the right thing to administer, so if in these cases where we get more improvement from a simple tenotomy than is possible to obtain from months and years of persistent and continuous use of medicine, we must admit that we are striking very near the cause of the disease.

Among the sources of reflex irritation causing headache and various functional nervous troubles the eye is admitted by nearly all writers of the present day to play a more important part than any other organ of the body. If it is true that the reflex irritation from "eye-strain," is sufficient to cause a headache, severe enough to prostrate the patient for two or three days at a time, why cannot it manifest its effects in the shape of a chorea or epilepsy? If it is true that we can have chorea and epilepsy from reflex irritation from the uterus and ovaries in the female, the genitals in the male, and the teeth and rectum in both sexes, why cannot an organ like the eye, which is in almost constant use during the waking hours, cause even more reflex trouble? It certainly seems rational that this should be so, and I believe that ere long insufficiency or want of balance of the ocular muscles will be acknowledged by the medical profession to be at least one of the causes of chorea and epilepsy. Although the result of these cases has partly convinced me that there is a great deal of truth in Dr. Steven's theories, yet I know that it requires a large number of cases to reach anything like definite conclusions in the treatment of any disease, and I hope in the near future to be able to report additional cases of these troubles, with the result obtained, whether that be good or bad, for or against the idea that insufficiency of ocular muscles can and *does* often cause both chorea and epilepsy.

REPORT IN SECTION ON MEDICAL JURISPRUDENCE, MEDICAL CHEMISTRY AND TOXICOLOGY.

By M. V. B. Clark, M. D., Sutton, Neb.

During the past twelve months the medical mind has been greatly excited over the conjugal question, and the preventing of conception. This question, from which all seemingly shrink, has been discussed very freely and plainly, and received in December last a fresh impetus from a scandalous sensation in Chicago, which was put up by the Chicago *Times*, for the speculative purpose of attracting attention to that paper. The *Times* saw fit to investigate the prevalence of abortions in Chicago, by the employment of a decoy, who visited a large number of midwives and physicians, pretending that she was pregnant and asking them to help her out of her dilemma. The result showed that a woman who is ready to undergo the risks of abortion, in Chicago, need not search hard to find a medical man to share them with her for a consideration. In an issue in that paper was published a list of those midwives and physicians whom the decoy had given away, one being no less a personage than the official Surgeon of Police. A supplementary list was given, of men who refused to commit this crime themselves but recommended others who would do it. The same issue of that paper contained a letter from Dr. Doering, president of the Chicago Legal Society, expressing approval of this investigation, and promising the support of the Society to this work.

This action of the Chicago Legal Society may be taken as an index of the attitude of every decent medical man in the United States; for there are no more uncompromising enemies of the crime of abortion, for convenience sake, than physicians. And the fact that some men or women whom the lax laws of most of the states permit to practice medicine, are willing to use the knowledge they have in an infamous manner, simply illustrates the adage that there are black sheep in every flock.

Such striking exposures bring fully into view our duty to grapple this subject, and come to a reasonable and practical decision as to the justification, if there be any, of the preventing of conception. Many of us have, among our *clientele*, ladies who think that "*their families are plenty large enough*," and who are often high up in society, and the church even, who continually press this subject home to us.

The variety of views held by medical men during the year are as different as the leaves of the forest. A candid summary of the discussion would seem to tend to its justification under some circumstances. The verdict in the controversy in this country has been nicely formulated by our brethren across the water.

At the third general meeting of the Russian Medical men at St. Petersburgh Dr. Peter N. Seidler read an interesting paper on the truly burning subject of the preventing of conception. While condemning an indiscriminate employment of any preventive means, the practitioner is fully justified in interfering with conception in the following three categories of cases: (1) In women suffering with more or less advanced pulmonary phthisis; (2) In women with organic cardiac disease; (3) In women suffering from profound anæmia, or failure of the general nutrition with a hereditary tendency to pulmonary tuberculosis. During the discussion following Dr. Seidler's communication Dr. Nil I. Vobly suggested that prevention is indicated further in such women as have once, or oftener, passed through extra-uterine pregnancy.

A question of surpassing interest on the obligations of the homœopathic physicians has been recently awakened, and has been brought into conspicuous prominence by the publication of a letter from Judge Barrett of the Supreme Court of New York to the *New York Medical Times* in which he says that, a physician designating himself an homœopathist and called as such to a patient has neither legal nor moral right to adopt other than homœopathic means in the treatment of the case. In short, such a practitioner is a specialist, and he has no more right to deviate from his exclusive assumptions than a chemist would presume to perform ovariotomy.

At the present time it is well known that but a limited number of so-called homœopaths believe that the law of *similia similibus curantur* is one of universal applicability. The great majority practice on the same basis as do all intelligent physicians. Although their education gives them a leaning toward the use of certain medicinal preparations which are attenuated or diluted, yet in this they are guided by experience and observation, and not by any such theories as Hahnemann promulgated. The term homœopathy, as Hahnemann understood it, does not fit the homœopaths of this day, and the community is deceived in so far as it believes it does.

The judge says: "If I call in a medical

man, who designates himself a 'homœopathic physician,' it is because I do not wish to be treated allopathically, or electrically, or otherwise than homœopathically. There is an implied understanding between myself and the homœopathist, that I shall receive the treatment which, by tradition and a general consensus of opinion, means small doses of a single drug administered upon the principle of *similia similibus curantur*. If there is to be any variation from that method, I have a right to be informed of it and to be given an opportunity to decide. Common honesty demands that before a confiding patient is to be drugged with quinine, iron, morphine or other medicaments, either singly or in combination, he should be told that the 'homœopathist' has failed, and that relief can only be afforded by a change of system. An honest 'homœopath' who has not succeeded, after doing his best with the appropriate homœopathic remedies administered on homœopathic principles, should undoubtedly try anything else which he believes may save or relieve the patient. But when he reaches that point, the duty of taking the patient into his confidence becomes imperative. The patient may refuse to submit to the other system, or may agree to prefer a physician whose life has been specially devoted to practice under that other system. He may say to the 'homœopathist,' you have failed, but I prefer to try another gentleman of your own school before resorting to a system that I have long since turned my back upon. Or he may say, well, if homœopathy cannot save me, I prefer to go to headquarters for allopathic treatment. The inference is, that a homœopathist using any but the remedies of, and the application of the principles for the cure of disease peculiar to that school, is liable to an action at law and damages, if any result, for practicing deception."

REPORT OF PROGRESS IN PATHOLOGY.

By L. A. Merriam, M. D., Omaha, Neb.

Progress in our knowledge of pathology depends so much upon the progress made in organic chemistry and physiology that it may be said we await their discoveries before we can solve the problems before us. Our knowledge of pathology increases in proportion to the progress made in the collateral sciences. Many theories have been announced and many experiments performed, and in a few words I will state the conclusions that seem to be well proven. Microbiology has been advancing and profoundly transforming the theory and practice of medicine, physiology and natural history, and is opening up immense horizons for the future of science, and especially concerning the active causes and the practical means of prevention of specific, infectious and contagious diseases, through the labors of the bacterio-pathologists, and what has been called the germ-theory of disease has rapidly approached a positive demonstration, and much praise belongs to Pasteur for his invaluable services.

In the discussion on Chronic Alcoholism, before the Pathological Society of London, January 15, 1889, it was demonstrated that the histological changes in the brain, spinal cord and nerves were in all cases essentially degenerative. That the direct effect of alcoholic liquors is upon the stomach, and the remote effects upon the liver and nervous system, and the corollary drawn was, that the injurious effects were in proportion to the degree of concentration of the alcoholic drinks.

Dr. W. R. Gowers, of London, in his Lettsomian lectures on Syphilis and the Nervous System, after speaking of the degenerative changes found in syphilis, refers also to the degenerative changes in diphtheria, hydrophobia and the influence of certain chemical agents, and sums up his discussion in these words: "It may, I believe, be regarded as a general law, and a law of much importance in practical diagnosis, that the isolated impairment of nerve structures, that have a certain function, when acute, indicates a toxic influence, when chronic, a degenerative process. It is instructive to note, that these two mechanisms are not entirely disassociated, that the degenerative process may be a late result of a toxic agent."

Similar language concerning degenerative changes in the lesions of different diseases are frequently found during the past year in the journals. All of which goes to show that the best scientific men of the age are beginning to recognize the value of the theory of evolution as explanatory of pathological processes, and that the theory of "Degeneration as the fundamental law of tissue changes in all diseases," which was written in 1884 by the writer, is worthy of consideration, and a valuable auxiliary to the proper understanding of histological changes in disease.

Francis Delafield, in a recent paper on Brights Disease, published in the New York State Medical Society Transactions for 1888, says on page 123: "The changes which we find in the cells are, a simple swelling of the cells, a disposition to degeneration and necrosis." Pitres and Villard have made some interesting investigations on peripheral neuritis in chronic rheumatism. Having had occasion to examine several peripheral nerves belonging to two patients subject to chronic rheumatism, they were astonished to find profound degenerations. Lodewyks and Haga both agree that in the disease known as beri-beri, all striated muscles undergo degeneration. Tscholowski, of St. Petersburg, also has found in beri-beri well marked degenerative changes in the peripheral nerves. Thus are pathologists coming to learn that, to unravel the mysteries of pathology, like all the secrets of nature, they must be studied from the standpoint of the scientific evolutionist.

HISTOLOGY—REPORT OF PROGRESS.

By W. F. Milroy, M. D., Omaha.

In the following brief paper the author has nothing whatever to offer that is original, but will endeavor to review a few of the more important events that have recently transpired in the domain of Histology. Since no report upon this subject was made before this society last year, I will not confine myself strictly to the twelve months last past.

Upon going over the published matter relative to the field of inquiry I have indicated, I do not observe any discovery that is startling or revolutionary or that will mark an epoch in the history of this science, and I shall therefore only hope to interest you upon a few points on which new light has been shed.

It is worthy of remark at the outset, how almost without exception, histological work at the present day is devoted to the examination of the tissues of the lower animals rather than man.

Protoplasm, a material which holds a very important position in relation to the structure and life processes of living bodies, may occupy our attention for a few moments.

Beale and Huxley were of those who early gave to this matter careful study. The former theistic, and the latter materialistic in belief, discussed the nature of this substance with great energy and awakened widespread interest in it throughout the scientific world. Even between men so eminent as these much confusion arose on account of a loose application of the term. The definition of Beale appears most convenient. He applies the name only to such material as the moving matter of the colorless blood cell, the granular matter around the so-called muclei of muscles and the contents of the vegetable cell. He excludes all formed matters which do not possess life and the attributes pertaining thereto; in a word, all the products of protoplasmic life.

Ten years ago, and much more recently, to a large degree this substance was supposed to be a very definite compound, complex in its chemical structure but nearly uniform in character and always found where life was present. It was under this impression that Huxley described it as "The Physical Basis of Life."

Regarding many of the ideas concerning protoplasm, entertained until very recently, modern microscopic methods have shown error. We know that protoplasm is not a definite chemical compound and that protoplasm itself can no longer be called "The Physical Basis of Life." Under the modern microscope, its seeming homogeniety has been disproved. Instead of a homogenious jelly, the microscope now resolves it into a very complicated structure. It may always be resolved into two parts, one of which is the life substance, called the protoplasm proper, and the other the food substance for the use of the protoplasm. This food substance is called duterplasm, and is purely a secondary substance containing cell-sap, oil drops, etc. It is the quantity of this which determines chiefly the size of the cell. The following account is by Dr. H. W. Conn, in the *Am. Mic. Journal:*

"The protoplasm proper is itself very complicated. It has one universal characteristic: It is always reticulated. Sometimes the reticulum is quite coarse and sometimes it is very fine. Its meshes are filled with the deuterplasm which supplies the protoplasm with its nutriment. The reticulum itself is made of threads of a hyaline material, and in these threads or fibres are imbedded numerous extremely minute bodies which have been called microsomata. Both the reticulum and the microsomata are essential to the protoplasm, as is proved by their constant presence and by the peculiar changes which they undergo during cell division. It is the changes in this fibrous network and in the microsomata which constitute the phenomena known as karyokinesis. Now it is hardly to be supposed that the simplest substance to which life can be reduced should be of such a complex nature. It seems much the more probable that one of these substances should be the primitive one, and by its action produce the other. If this be true, there is little doubt that the microsomata should be regarded as the primitive elements, and the reticulum as secondary. Where there are these microsomata there is life. These minute bodies are grouped together, differentiated in one way and another, and by their different groupings give rise to the various forms and properties of protoplasm.

But recently microscopic chemistry has been developed, and has already done something in the study of protoplasm, with great promise of more in the future. No longer can we regard protoplasm as a single chemical compound, but we must look upon it as a mixture of compounds. Motion of protoplasm is said to be due to the stretching and contracting of the protoplasmic fibers caused by changes in its density, the result of oxidizing and reducing changes. The subject is as yet only in its infancy, but we are certainly beginning to know something about the chemistry of protoplasm. We know that it is not a definite chemical compound, and that protoplasm itself cannot be called the physical basis of life.

Naturally, the content of our conception of the organic cell has been greatly changed by this study. It was formerly called the unit of organic life. It is now known to be a complex colony of such units, if indeed such units can any longer be said to exist. At first the cell was regarded as a cell in the true meaning of the word, and the cell wall was looked upon as an essential part of it. The cell wall was soon found to be only a secretion from the protoplasm, and this was, therefore, then regarded as the essential part. * * * The importance of the nucleus slowly grew in the minds of cytologists.

Thus it is shown that without the material which is present in the nucleus it is impossible to perpetuate species. In accordance with its important functions the nucleus is found to be correspondingly complicated, not only in its chemical nature but also in its structure. The protoplasmic reticulum is here the most dense, the microsomata are the most abundant. Usually, the microsomata are grouped together in one or more masses, which appear as little rounded bodies. These are what have long been known as the nucleoli. Of course, if the microsomata are the fundamental life elements, the nucleoli must be regarded as special spheres of activity. And this is not the end. It frequently happens that inside of the nucleus there is still a smaller body, and sometimes inside of this still another. Each of these masses of microsomata may be regarded as successively nearer the real centre of activity of the cell. Cytologists are, indeed, now inclined to think that a single one of these minute microsomata is enough to be the starting point of a cell; and if this is true, the complexity of a single cell or a single nucleus, or even a single nucleolus, is almost inconceivably great.

In short, the study of the last few years has developed a new branch of science. Some day it is not improbable that cytology may include a study of the history of the early processes in the formation of a cell from the simpler elements of life, as embryology includes the study of the history of the development of animals."

One of the most noticeable advances recently in general surgery, and one reflecting not a little credit upon the surgeon's art, has been in the line of operations upon the bra

For the knowledge which has rendered this possible the surgeon is largely indebted to the facts recently adduced by the histologist, regarding cerebral localization. In view of this fact, the following conclusions of Dr. Marchi, summarized from the *Dublin Journal of Med. Sci.* for June, 1888, will be of interest:

The minute structure of the corpora striata and optic thalami.

1. The nerve cells met with in the corpora striata are of two sorts—great and medium. They are furnished with numerous prolongations, among which only one is distinguished by special characters, and this one is the nerve prolongation; all the others correspond to the so-called protoplasmic prolongations.

2. The nerve prolongations behave in two ways. Some of them early subdivide and form a very fine nervous network, the others go directly to form the axis-cylinder of a fiber.

3. In the two nuclei of the corpus striatum both types of cells are observed.

4. In the optic thalimi we do not find isolated groups of cells; they are scattered irregularly in the whole mass of the gray substance; they are prevalently large, and many are very similar to those of the anterior cornua of the spinal cord; they present, in the corpora striata, the unique nervous prolongations and many protoplasmic prolongations.

5. Cells of the first type predominate in the optic thalimi, which thus differ from the corpora striata.

6. In correspondence with the two-fold behavior of the nervous prolongations, the fibers terminate in the axis-cylinder prolongations or the dense network referred to.

7. The internal capsule contains fibres which unite the crebral peduncles directly to the corona radiata; others departing from the peduncle, halt in the ganglia of the base; others go from these to the corona radiata; finally some spring from the cells contained in the thickness of the capsule itself, and take an ascending or descending course.

8. The protoplasmic prolongations are in relation, by their fine ramifications, with the vessels and cells of the neuroglia.

9. The neuroglia is essentially represented by cells having numerous long, fine, prolongations ramifying many times.

10. The ependyma which covers the corpora striata and internal surfaces of the thalimi, is constituted by cylindrical cells, the slenderest part of which is continuous with a prolongation which gives place to very many ramifications, most of which are inserted into the vessels.

From these anatomical facts Marchi is inclined to believe that the corpora striata are mainly sensory, and the optic thalimi motor, though the functions of both are probably mixed.

"Are bone fibres calcified?" is a question that has occupied the attention of several prominent German histologists. Ebner's view that the lime salts are deposited in the cement substances between the fibrils, was criticized by Kolliker, and in his recent reply to this criticism he seems to have well fortified his position. In a section of bone which has been burned or subject to prolonged boiling, minute tubes which have held the fibrils may be seen.

Another disputed question bearing upon the growth of bone relates to the change of epiphyseal cartilage cells at the line of ossification. Do they become converted into osteoblasts, remain unchanged, or perish? To discover the truth upon this question, Leser has performed a series of experiments upon dogs, cats and rabbits, with the following results:*

In the epiphyseal cartilage the new growth of cells follows the same rules that are acknowledged to be characteristic of the new growth of cells in other tissues. At the line of ossification small, young cells assemble in groups, in intimate relation to the blood vessels. Immediately one notices big, clearly granular cells of various forms. These originate in the medulla of the bone and appear to be identical with Gegenbauer's osteoblasts.

Other more or less important studies which I will not stop to describe, are as follows: Macullum on "Nerves in the Liver," Babinski on "Structure of Striated Muscular Fibres in Man," Orthman on the "Structure of the Fallopian Tube," Kolster on the "Structure of the Reticular Cartilage," Davidoff on "The Relation of the Intestinal Epithelium to Lymphoid Tissue," and Blaschko on the "Anatomy of the Epidermis."

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*New York Medical Journal, May 18, 1889.

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THE OMAHA CLINIC.

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Original Articles.

METABOLISM AND JUGULATION OF FEVER.

By WM. PROTZMAN, M.D., Lincoln, Neb.

The metabolism of the normal heat of the body, according to physics and physiological chemistry, is due to the transformation of *potential* into continuous kinetic and other energies, in other words, to vibrations of both units and final units of matter, called kinetic energy. Fever heat is increased normal heat of the body, where the transformation of potential into the different energies takes place very rapidly. Fever also depends upon a factor called *irritability*, that is found in every tissue, in every muscular and nerve fiber. This factor depends upon the electrical powers of nutrition, and is the excito-motor that causes the metabolism of potential into the different energies; that causes oxidation of tissue and evolution of heat. And whatever increases or decreases irritability increases and decreases the transformation of potential energy, with a corresponding evolution of heat. We are taught in pathology that poisonous substances introduced into the tissues excite irritation, and that causes tissue changes; that bacteria prevent normal cell fermentation by abstracting oxygen and other elementary substances, setting up a fermentation of their own, that excites the normal into abnormal irritability, that increases the transformation of potential energy and heat of the body. Abnormal cell fermentation is always found at the bottom of morbid symptoms (Zeigler). Therefore increased or fever heat of the body is only a symptom of disease, or the outward sign of internal changes.

Some good, indulgent brother sent me a journal from Denver, Col., devoted exclusively to the "alkaloid theory," now before me. If this doctrine is true, I will quit my CLINIC, *Brief*, and four or five other old medical journals, and confess that I, with the balance of my regular brethren, have been killing people for thirty years.

These alkaloid fellows claim that by controlling symptoms we prevent the localization of a malady. It strikes me very forcibly that this doctrine, as I have already tried to prove, is contrary to experience, as well as pathological teachings. It is true, perhaps, in the majority of cases that by controlling symptoms we emeliorate, but by no means "jugulate," a specific self-limited germ disease, unless the remedies contain specific properties. Non-specific fevers that are caused from exposure to cold, wet and climatic changes, very often through vaso-motor disturbances, cause engorgement of the pulmonary capillaries from which we may have rigors, fever, dullness on percussion, difficult breathing, and many other symptoms that point toward pneumonia. Yet in the absence of a specific germ, we have neither the crepitant "Rale" rust-colored sputa or a typical case of pneumonia. For example, we will take the case already referred to, that has been exposed to cold, etc. Give the patient a hot pack, an active cathartic, antipyretic doses of quinine and stimulate the vital energies with alcohol or ammonia, bring about co-ordination of the circulatory system, and in a day or two this prospective case of *pneumonia* will be well. But suppose we are called to treat a similar case, judging from the symptoms, but that is caused from the presence of a pathogenous germ. Is it in keeping with experience, with micro-pathological investigations, or with statistical reports, to even expect this patient to be well in less than from three to four weeks. I answer no. And why? Because in self-limiting fevers, such as pneumonia, typhoid and scarlet fevers, small-pox, and all other germ diseases, the germs will go on germinating until they exhaust all the nutritive soil; that usually takes from two to four weeks, after which they die from starvation, leaving the system in a pathological condition from their abnormal fermentation, their dead carcases, etc.

Now, it appears to me, (yet I may be too much of an "old fogy,") if there is any truth in this "jugulation theory," whether with pure alkaloids, or with crude remedies, either must contain germicitic properties, that will kill the germs outright, or that will destroy their food or surrounding environments in which they germinate, otherwise we cannot jugulate self-limiting diseases. It is true that one of the alkaloids of opium quiets pain; also the alkaloid of aconite quiets the circulation, but let me ask, do not the crude remedies also do the same things, and does either cure self-limiting diseases? The answer is, "No."

But I have already consumed too much valuable space, I will therefore conclude by saying that THE OMAHA CLINIC is becoming more interesting and valuable to the busy practitioner every succeeding month. May success attend every member of its staff who are giving us a journal that stands in the foremost rank of medical literature. But its readers dare not be idle, they also have an important duty to perform, to write short articles and contribute round dollars to make the editors happy.

OPPROBRIUM MEDICORUM.*

By FREDERIC S. THOMAS, M.D., Council Bluffs, Ia.

The restless human brain, teeming with its numberless theories, is each year startling the world with its new portraitures. Far above and beyond the sphere of human agencies, facts exist as a divinity. Theories, like children's toys, amuse for a day, to be thrown away; but facts exist forever and are unchangeable.

To-day the secular press and medical magazines abound in articles on remedial agents. Each writer in his endeavor to attract attention has put forth some new theory of cure, and hundreds more, who have become their devotees, are placing their names upon unqualified certificates of cure. Each year the world is having thrust upon it numberless finely devised theories, with but a handful of well established facts.

When Ponce de Leon sought the fabled island of Bimini, upon which was supposed to flow the waters from the "fountain of youth," he but prophetically portrayed to future generations the multiplicity of elixirs there were to be offered to an eager world, to allay their pains, and refresh their wasted bodies.

Paracelsus obtained from a Greek the "Elixir of Trismegistus," and aroused the old world with his remarkable cures, and professed to know the art of prolonging life and curing all diseases. He boasted "that the hairs of his beard held more learning than was possessed by all the universities and medical writers of Europe combined." In this he but prepared the way for the claims of the many who were to follow, and who are to-day attracting much attention by their pretended wisdom.

When Hahnemann advanced his theory of "*Similia similibus curantur,*" which he took largely from his erratic predecessors, Paracelsus and Haller, he gathered a following, which for a time was thought would utterly destroy the medical teachings of the regular schools.

But men eminent in the homœopathic school soon began to admit the error of their great founder's teachings, and gradually replaced pathology as a part of their teaching. To-day nothing is left of the system but its name and a studied reverence for their discarded Organon.

A few years ago the "blue glass craze" was upon us. Many hypochondrical men and hysterical women sat each day where the noonday sun might envelop them in its blue rays, and feed their imagination and refresh their wasted (?) bodies.

Do you not remember when Condurango was a household word? The owners of this medicine published the wonderful cures it was achieving at the hands of medical men. Many practitioners of medicine gave certificates of its great value, and the late Vice-President Colfax published an open letter to the effect that "his mother-in-law had been cured of a cancer by its use."

A few years ago through the efforts of Mrs.

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*A paper read before the Medical Society of the Missouri Valley, September 19th, 1889.

Eddy, of Boston, many were induced to believe theories she advanced, which she labeled "Christian science." This strange doctrine that declared "that disease was purely imaginary," and that the remedial agent was "prayer," attracted both the mentally weak and those possessing an unbalanced nervous temperament, until her followers were counted by the thousand.

Much of the haste manifested by the public to rush after each new medical *ignis tatuus*, must be attributed to medical men in their haste to adopt every new theory, and try every new remedy that is presented to them.

This will be known as the age of electricity, when everything moves with the rapidity of thought.

Men (even medical ones) are no longer content to gain knowledge by the slow process it requires, but rush along in the busy whirl, catching merely glimpses in their rapid flight.

The Harveys, the Jenners, the Sydenhams, Hunters and Læennecs, made the real progress in medicine in the past. Of men like Koch, Klein, Sternberg and Pruden must we expect something in the future; men who are content to carefully study, if need be, months and years to establish a fact.

To-day we are confronted with one of the most hasty and ill-advised advertising schemes that ever disgraced the regular profession. Headed by Brown-Sequard, of Paris, and seconded by Hammond, of this country, the medical profession is running wild over the testicular juices of lambs and guinea pigs. While the medical profession may offer as an excuse for their haste, the well-establishad reputation of Brown-Sequard, they cannot satisfy a critical public for their want of knowledge that this once great man is now in his dotage. That his enfeebled body, craving rejuvenation, and grasping like a drowning man at a straw for support, had, like the poet's dream, given the assurance to the public that the secret of perennial youth was at his command.

Many no doubt have seized upon this "new fad" as a stepping-stone to personal notoriety, or as a means of cheap advertising.

This condemnation of Brown-Sequard may appear somewhat late to be presented to this body of thinking and reading members. The writer might have passed it by in silence, but when a man so great as this illustrious Frenchman presents not only a remedial agent of doubtful value, which he extols, but presents other doctrine, which strikes at the very foundation of morality, it is but proper that we enter our protest.

Real medicine has made a wonderful advance in the past decade. The time is not far distant when medicine will be among the perfected sciences. This happy period will not come until medical men shall have demonstrated to the world that medicine has no part in priestcraft, or that diseases are not banished by amulets or charms.

How shall this be accomplished? Not by the discovery of potent elixirs, but by making pathology an exact science, and by your skill as a practitioner of medicine and surgery you demonstrate to the world the excellence of rational medicine.

*REPORT OF A CASE OF ABSCESS OF THE LUNG.

By A. B. Somers, M. D., Omaha.

Was called May 27 to Franklin, Neb., to see Jed Field, aged 12 years, and received the following history of his sickness:

Was taken sick March 31, with a disease diagnosed and treated as pneumonia of left lung, there having never been any of the characteristic sputa of pneumonia present during his sickness. Two weeks from the onset of his sickness a prominence appeared in the region of the left breast, which gradually increased in size for three weeks. During this time his difficulty was diagnosed as pericarditis, with effusion, and the prominence attributed to the effusion. At the end of this time the boy was suddenly taken with an attack of profuse vomiting, and diarrhœa of a very fetid odor, so much so that some persons present had to leave the house. The boy sank into a state of collapse and was thought to be dying, but revived after some hours, during which time stimulants, friction and warmth had been faithfully administered. With this attack of vomiting and diarrhœa the prominence in the chest subsided, but its subsidence was attributed to the profuse sweating that had taken place during the period of collapse, together with increased urination that occurred about the same time. For a time all the symptoms in the case improved, and they began to have hopes of the boy's recovery; but soon the prominence in the chest wall began to reappear and increased in size for three weeks, notwithstanding blisters were freely used over the chest and diuretics and hydragogue cathartics faithfully administered until the time I saw him, eight weeks from onset of sickness, when I found the condition as follows:

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*Read before the Medical Society of the Missouri Valley, Sept. 20 [illegible]

There was a decided prominence or bulging of the chest wall of the left side, extending from near the clavicle to the seventh rib, and from the sternum to a line two inches outside of the nipple. This prominence was somewhat heart-shaped, the apex being at the seventh rib and the base near the articulation of the clavicle and sternum. Percussion revealed an area of dullness extending outside of the space described. Auscultation was negative in its results. The apex heart beat was behind the sternum, between the junction of third costal cartilages with the sternum; the base of the heart was near the clavicle on right side of sternum.

His general condition was similar to a person after a long run of typhoid fever, body very much emaciated, pulse 120 per minute, respiration 30 per minute, eyes sunken, tongue dry and red with sordes on the teeth and lips, inability to move from one side of the bed to the other, or even hold a glass of water to drink, had not been raised from recumbent position for some weeks, and could lie in no position only on the back or turned slightly toward left side.

Notwithstanding the arguments presented in favor of this being a pericardial effusion, it seemed plain to me that this was nothing else then a lung abscess that had discharged itself through the alimentary canal three weeks previous and gradually refilled.

It was decided best to explore the cavity, and accordingly a large-sized aspirator needle was introduced between the fifth and sixth ribs, in a line with the left nipple, and one and one-half pints of a very offensive puss withdrawn. Four days later an opening was made at the same point and a large drainage tube introduced, allowing the remaining pus to discharge itself, and the cavity washed out with carbolized water, followed with boiled water.

This process was repeated daily, and the discharge began to lose much of its offensive character, but the little patient gradually sank away, and died from exhaustion five days later, nine weeks and two days from the beginning of his sickness. No autopsy was held.

At the March meeting of this Society, Dr. B. F. Crummer presented a report of a case of Encysted Empyema, following pleuro-pneumonia, with autopsy, his paper being published in the August number of OMAHA CLINIC, in which he refers to Germain See's description of this class of cases as *infectant* pneumonia. In my opinion the case just described was of this same character, and that the patient under consideration never had the common croupous pneumonia.

*TRACHELORRHAPHY FOR BILATERAL LACERATION OF CERVIX UTERI.

By L. A. BUTLER, B. S., M. D., Harvard, Neb.

When my application for membership in this society was presented, your worthy secretary, Dr. Carter, suggested that I should present a paper or report of some case at this meeting. As I live in the country my practice is that of the general practitioner, of which we country doctors make a specialty.

In considering upon what theme I should present a paper to-day, the conclusion arrived at was that most everything in gynecology interests the special general practitioner, or at least a large number of them interest themselves to an extent sufficient to undertake the care and treatment of everything that comes along after some plan—and as is too often the case, a routine plan, seemingly so much so that not infrequently all cases become as one, regardless of any pathological, physiological or mathematical deduction. It must be apparent to a casual observer, whether he belongs to the great army of followers of Esculapius or not, that there are those who, by some unknown or magical means, in the treatment of gynecological cases, by doing a great deal of sounding, and swabbing, and plugging with balls of cotton, once or twice a week *pro re nata*, have reached a considerable amount of notoriety. We may not altogether deny that there is some danger of our either unwittingly or involuntarily falling into a special routine treatment in the care of this class of cases to be met with in every community, and judge that because there is a similarity in the rational signs, on direct questioning, that the disorders are about the same and call for like treatment.

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The case I report to-day is one where such a routine as described had been carried out, to the full letter, the *modus operandi* of such treatment producing negative results. The case going the rounds, giving all the doctors a chance, eclectic and homeopathic, without receiving any perceivable benefit therefrom. Laying on of hands and prayer cures were tried to no avail, until the poor patient had suffered, like the woman spoken of in the Scriptures, "many things of many physicians," and exclaimed from the bottom of her heart, "*magnis dolor est mihi!*" (my grief has been great). Before giving up in despair, the conclusion was arrived at on the suggestion of a friend, as a dernier resort, to fall back to the regular faculty. It was during the month of March, 1887, I was called to see the case in question, Mrs. P., residing thirteen miles in the country. Arriving I found a small, delicate woman, badly nourished, pale, weak, nervous and emaciated, 27 years of age, complaining of considerable pain in the region of the uterus. Upon inquiry was informed the lady had been an invalid for about four years, at which time, after a three days labor, she was delivered of a well developed child, with forceps, the child being dead. Health had been good up to this period, and to which all her ill filling could be traced.

On making a careful examination it was ascertained a bilateral laceration of the cervix of the womb existed, and this diagnosis was given. An operation was advised, as it was evident in my mind that no other procedure or treatment would produce any certain result, and as the only hope of anything like a permanent *benefit* or *radical* cure.

The folks knowing I had done an occasional bit of cutting, the operation was consented to; prescribing for the case an alterative and tonic treatment, along with plenty of nourishing food, which was continued several days, and according to appointment, procuring assistance in my friends Dr. M. A. Perkins, of Trumbull, and Dr. Shoemaker, of Clay Center, proceeded to the place for the purpose of performing the operation. An anæsthetic in the form of chloroform was administered, giving a generous drink of brandy previous, and inhalations of oil of cloves to overcome any tendency to nausea that might supervene.

The patient being thoroughly under the influence of the anæsthetic, complete narcosis being produced, placed in Sims' position, the operation was proceeded with. The uterus was brought down with the vulselum. It was then ascertained that the lacerations on both sides extended as far up as the vaginal junction. Two tenaculums were placed in situation, one in each flap or edge of the *laceration*. On the left side the flaps were approximated as near as could be done under the circumstances, by no means an easy task on account of the existing hypertrophy on the inner walls of the two sides.

Deciding where the denudation should be made, catching hold of the lower side of one of the flaps with a tenaculum, with a pair of scissors the mucous membrane was cut away as far up towards the os internum as the laceration extended. There was also some hypertrophied tissue that had to be removed. The other flap was treated in the same way. Removing completely the separated tissues, very much the same procedure was carried out on the other side, the result being two long, raw surfaces, one on either side of the laceration. There seemed to be a considerable amount of hemorrhage, this being checked by leaving a linen tampon in place for a few minutes saturated with a weak solution of tannic acid. By using the tenaculum the denuded surfaces could be easily brought in direct apposition, retaining them there. Sharp-pointed, short needles were used. By the use of the Russian needle holder silver wire sutures were used, taking stitches about one-fourth of an inch deep. Beginning at the upper part of the angle of the denudation, stitches were made two or three lines apart, on down, until the former laceration was completely obliterated. Very much the same procedure was carried out on the other side. The sutures were then twisted, one by one, beginning at the upper portion first, bending them down along the side of the cervix. This completing the operation, the patient was permitted to rally from the influence of the anæsthetic. There was but little nausea and no vomiting.

The after treatment consisted in the vagina being cleansed twice each day for a few days, by antiseptic injections, the patient being kept in the recumbent posture for about three weeks, wearing a small soft-rubber inflated pessary by way of support, which of course was removed every day, cleansed and returned. The patient was kept on tonic treatment, with an occasional mild alterative to keep the bowels well regulated. At the same time the best of nourishing food was given. In due time the sutures were removed, complete union having taken place.

As soon as able the patient was advised and permitted to ride out every day. The weather being delightful she always felt very much refreshed, appetite became better, improvement was rapid, regaining her former health and strength, making a permanent and complete recovery, and to my personal knowledge has been free from pain, and has attended her household duties during the past two years.

*AN UNRUPTURED HYMEN—A CAUSE FOR PROTRACTED LABOR.

By Prof. P. S. Leisenring, M. D., Omaha.

Recently I read an article reported by Dr. H. Taylor, in the *British Medical Journal*, on "Labor Completed at Full Term Without Rupture of the Hymen." Dr. Taylor says: "The woman had been in labor for a considerable time, and the midwife told me that there was something which prevented the head of the infant from passing out of the vagina. I examined her carefully, and found a large, semilunar-shaped, tough membrane, stretching quite across the lower two-thirds of the vaginal outlet, against which the head was being very strongly pushed by strong uterine action. With some difficulty, I was enabled to slip the membrane clear of the child's head, and the labor was then soon completed. The case seems to me of great interest in a medico-legal point of view, as showing that it is quite possible for a child to be born without a rupture of the hymen taking place, and that, therefore, non-rupture of this membrane is not a trustworthy sign of penetration not having taken place in cases of rape, etc."

The reading of the above article recalled to my mind a case of labor, complicated with an unruptured hymen, that occurred in my practice a number of years ago, a report of which I thought might prove interesting to at least the younger members of the association.

I was called to see Mrs. B., who was said to be in labor at full term. She was a well-formed, healthy woman, 28 years of age, and had been married for over two years. She always enjoyed good health, except at her menstrual periods, when she suffered greatly from dysmenorrhœa. On my arrival, I was told that she had been in labor for several hours. Her pains were regular, returning at short intervals, with considerable bearing down force. On making a vaginal examination, I was considerably non-plused at not being able to find the mouth of the womb, nor an opening leading to it. The vagina, during a pain, was closed with a dense, thick, unyielding membrane. In the absence of pain, the presenting parts of the foetus receded, and on pressing with the examining finger against the obstructing membrane, which was the hymen, it formed a cul-de-sac of several inches in length. I carefully, by the touch, examined for an opening to insert the end of my index finger so as to enlarge it enough to make the necessary examination and deliver the child, but could find none, the hymen forming a complete septum of unyielding and apparently impervious membrane, through which I could feel the presenting part of the child. After using considerable force with my finger to rupture the membrane, and failing to do so, I explained to the family the nature of the difficulty, and informed them that the only remedy was an incision, assuring them that there was no cause for alarm. On making a careful ocular examination, I found near the upper edge of the hymen a small orifice, large enough, after some effort, to insert a silver female catheter. I here inserted a grooved director, and with a sharp-pointed bistoury made a crucial incision large enough to introduce my index finger, with which, after considerable effort, the opening was sufficiently enlarged. I found the os uteri dilated, with the bag of waters intact, and a head presentation in the first position. After five hours of severe labor, the external parts being excessively rigid, I delivered her of a large, plump, healthy, female child. She had a speedy and successful recovery.

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* Read before the Medical Society of the Missouri Valley, Sept. 20 1889.

In an active continuous practice of upwards of thirty-seven years, this is the only case of the kind I have met with, and on inquiry of a number of old practitioners I am told that none of them has met with a similar case. Authors and writers in many of the works on obstetrics do not refer to an unruptured hymen as a cause of difficult or protracted labor. Those writers who do refer to it at all, dismiss the subject as a rule, with comparatively few words. Burns, Gooch, Lusk, Bedford and the American System of Obstetrics do not refer to it at all. Ramsbotham says, (page 175): "Impregnation has occasionally been effected, although the hymen has never been broken, and if this membrane remained entire until the period of labor, it would form a greater or less impediment to the passage of the child. I have been consulted in a case of this description, and another has come under my father's personal observation. Such a cause of protraction must of course be met with in a first labor, and by this circumstance it could be discriminated from a cicatrix, the result of previous sloughing. Its situation would be just at the vaginal entrance. The aperture must be dilated, if possible, by mechanical means, and if that cannot be effected the case must be treated in every respect upon the principles laid down for the management of a cixatrix."

Dr. Dewees mentions of having been called in consultation to one case. Cazeaux, in his late work (page 681) says: "The hymen may occasionally persist, even after copulation, and thus constitute an obstacle to the expulsion of the child. A persistence of the hymen does not always prevent conception, since most authors relate instances in which they were obliged to divide it at the time of labor in order to make a free passage for the child. They have even detailed examples of pregnant women in whom a second hymen was found some distance above the first. Again this membrane has persisted after the delivery, as proved in a case observed by Mekel, Sr., and reported by Tolberg. A woman, after having expelled a fœtus of five months, surrounded by all its membranes, still preserved her hymen intact, circular and tense."

Playfare (page 44) in speaking of the hymen, says: "Sometimes it is so tough as to prevent intercourse altogether, and may require division by the knife or scissors before this can be effected; and at others it rather unfolds than ruptures, so that it may exist even after impregnation has been effected, and has been met with intact in women who have habitually led unchaste lives. In a few rare cases it has even formed an obstacle to delivery, and has required incision during labor."

Leishman (page 556) briefly says: "The persistence of the hymen is another condition of obstruction to the course of labor, which has sometimes been observed to such an extent as to constitute an impassable barrier."

Galabin (page 392) remarks: "Sometimes there is an almost complete atresia from a congenital transverse vaginal septum above the level of the hymen, or the hymen itself may have a small orifice, and may have been so tough as not to yield in coitus."

The following case was reported by Dr. James Nickenbotham in the *British Medical Journal*, June 25th, 1881: Mrs. D. had been in labor twelve hours when I saw her. Her pains were and had been very strong and forcible. On examination I found the vulva distended by a round, firm, but elastic body, which for the moment I took to be the unruptured membranes, but I saw that it really was an immensely thickened hymen, having a very small opening at its anterior edge, which would barely admit a probe. An incision was made with a pair of curved scissors, and the labor was soon terminated by the natural efforts, the head being immediately behind in the still unruptured membranes. An inspection showed the divided hymen to have been sacculated; it was so thick as to make its division by the scissors difficult."

The above is about all the literature I could find on the subject, showing that the complication is rare; though it is well known. Yet it is one of great importance from a legal, or rather a medico-legal standpoint. It proves very clearly one fact, viz: that a hymen *intact* is not a proof of virginity. Although my patient had been married for over two years, and was a bright, intelligent woman, yet she was ignorant of the condition of the parts. However, her husband did in a quiet way say to me, "That he always suspected there was something wrong."

*A CASE OF RABIES.

By J. P. Lord, M. D., Omaha, Neb.

Report on the case of John Schubert: At 7 A. M., of May 9th, 1889, I was called to see the above named patient, a Bohemian, aet. 30, married, a wood carver by occupation. The messenger urged punctuality, stating that the patient was in great distress, from difficulty in breathing, and that he (the messenger) thought it was heart disease. I found the patient bathed in a most profuse perspiration, eyes glaring, with dark lines beneath, pupils widely dilated, pulse 84; temperature under tongue 99.4°; tongue moist with a light coat and had a peculiar livid appearance. He demonstrated his inability to drink by having water brought, the sight of which produced a spasm of all the muscles of deglutition and respiration, and he sank back upon the bed struggling for breath and suffering intense pain from the frightful contractions of the muscles described. I had never seen a case of hydrophobia in man, but this case at once suggested that dread affection. The patient was perfectly rational, and gave his history. The prominent symptoms as detailed by himself and wife were that he had been feeling indisposed for about two weeks, although he had continued at work. During this period he was very despondent and frequently expressed to his wife that he felt as if he was going to be seriously sick, and had grave forebodings as to the result. He experienced a sense of impending evil, and later frequently said that if he *was* going to be seriously sick he would not recover, and feared that a dire calamity was about to befall him. For three days he had been suffering from what he called rheumatism in his hand, which had gradually become more severe, and extended to the wrist, fore arm, elbow, arm and shoulder, and finally his neck and head. The pain still lingered when I saw him, and he wore mustard plasters for its relief at that time. He had eaten little breakfast the previous morning and had gone to his work feeling badly. He ate no dinner, and felt so ill that he returned home late in the afternoon, could eat no supper and went to bed sick. Was sleepless and thirsty, but could not drink, the water could not be swallowed and the repeated attempts had made matters worse, and at that time the sight of water was provocative of a paroxysm. To overcome this he had made use of a nursing tube and had succeeded in swallowing a very little in this way, but that soon failed him. To appease his urgent demand for something to quench his thirst, I suggested his sucking a lemon, all to no purpose. Thinking that a semi-solid substance might be swallowed, I ordered some currant jelly given him, and the greater portion of the first spoonful was swallowed, but all subsequent attempts were unsuccessful. I ordered small bits of ice that he might hold them in his mouth. This was grateful to him, but his pharynx would let no liquid pass its guarded portals.

The history of his bite was as follows: About two months previously he had been bitten by his puppy. In fact he had been bitten repeatedly, but had thought it of no consequence. The puppy had shown considerable irritability, and when his master would reach for the coal bucket by the stove the dog would fly at his hands and bite quite savagely. This was thought to be cute in the pup, and was tolerated. The wife became afraid of the behavior of his pupship, however, and remonstrated with the husband for keeping him; "that he was sick," "was not right," "he had the thumps." Thereupon the husband made away with him, and the dog and his bites were dismissed from their minds. Although the question of the bite having been raised by my questioning, for the morale effect I had ridiculed the idea of its having anything to do with his trouble, stating that it was altogether too long ago to have any effect at this time, and assured them that it was another affection. Giving the patient a ¼ grain of morphia with $\frac{1}{150}$ of atropia hypodermatically, and prescribing chloral and bromide 30 grs. each, to be dissolved in milk and administered per rectum, I took my departure, beset with that foreboding that the physician so often experiences when the sky of his prognosis has that ominous look so familiar before an impending storm.

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Dr. Van Giesen accompanied me when I next saw the patient at 1:30 p. m. Was very calm and better in all respects. His paroxysms were less severe and were only induced when he renewed his attempts at swallowing. His temperature at this time was 97$\frac{6}{10}$° in mouth, pulse 60. The morphia was repeated as before, and some tablets left to be dissolved upon the tongue from two to four hours, as required, to maintain the present good effect. At 7:30, condition much the same P. 72; T. 98°. At 9:30 he was less quiet than at former visit. Showed more agitation, and countenance had a pinched, wild look. Pupils were reduced to about normal, and the mouth and skin were drier, the result of the free administration of morphia. The chloral and bromide were ordered repeated per rectum, to be followed by a second dose in case he did not sleep. I went home for the night, expecting to be summoned before morning, but in this I was mistaken, but before breakfast it was necessary to see him, he having become very uneasy. I found the patient in an extremely excitable condition. Immediately assumed the sitting posture upon hearing my voice, and began to relate his distress. That he was very thirsty, but could not get a drop into his stomach, and asked the advisability of a cutting operation, to put water into his stomach. If he could only drink he would be all right. His pulse at this time had risen to 108 and his temperature to 101$\frac{8}{10}$°. I have omitted to mention that during a paroxysm his pulse was increased about twenty beats and his respiration from the time he was first seen was extremely irregular and characterized also by an intermittency such as I had never seen.

At this time the former measures of treatment were renewed, with the usual effect of temporarily quieting the patient. From the first there was very little cutaneous sensibility, and now he seemed not to feel the introduction of the hypodermic needle.

At the next visit, about 9 o'clock, I was accompanied by Dr. B. F. Crummer, who verified my diagnosis by exclusion. At noon Dr. Ralph was shown the case. He said he could call it nothing else but rabies. The patient showed no change except for the worse. Bowels had moved several times from the use of nutrient enæmata and the chloral and bromide before mentioned. The latter being no longer retained he became much worse, and showed a great deal of nervous excitability, although perfectly rational. It will be of interest to mention here that at this time the paroxysms were induced by the enæmas. Feeling no longer secure in using the thermometer by the mouth, it was not used at this time, but the pulse was 115 during freedom from paroxysm.

Dr. Tilden was called in consultation at 3 p. m. Pulse 124; temperature 103° per rectum. During the previous night the patient found himself unable to pick bits of ice from the saucer which he had beside the bed, because his fingers coming in contact with the water provoked the dreaded fit. His ingenuity overcame this by having bits of ice brought to him in a strainer. The sight of water or even the cup now precipitated his spasms. It had been some time previously that he had substituted the cup for the glass that he could not see the water, but a suggestion of water by the sight of a drinking vessel, or the thought of it, now gave him great agony.

During the afternoon a relative with whom he had had some misunderstanding, and with whom he was not on speaking terms, came among other friends to see him. This so enraged him that he threatened to kill his visitor, and turned upon the wife and friends in a tirade of abuse for having admitted him to his presence. He made frequent demands for the butcher knife, and wanted to kill them all when excited by a paroxysm, which now came at intervals of 15 to 20 minutes without apparent provocation, and was much worse since his excitement caused by his unwelcome guest. He now charged them all as plotting to kill him, and charged his wife with gross immorality, and her presence so exasperated him that it was necessary for her to remain in an adjoining room. During one of these seances at about this time he got out of bed and nearly escaped from the room. His case had now become noised about, and the reporters began to come around, each eager for a scoop, "and did he froth and bite and bark?" So aroused was the neighborhood that the street was full of people. The fences, the front doors, the back doors and the coal sheds formed impromtu amphitheatres. Indeed, a call from the tire department to the community would have caused less concern.

At 5 p. m. his pulse was 140; temperature $103\frac{6}{10}$°. At 6:30, pulse 156; temperature $104\frac{8}{10}$°. At this time he vomited a viscid and frothy mucus, after which there was much spitting of frothy saliva. He remained with his face to the wall in a morose apathetic state, and kept up a constant muttering. There were at occasional intervals slight, short, sharp spasmodic contractions of the muscles of the chest, which forced the air suddenly from his lungs, and the larynx being in a state of spasm at the same time, he emitted a peculiar barking cough. Not a bark nor any imitation of one, so far as an imitation of the dog is concerned, though what the laity might call one, but simply occurred in a mechanical way, due as I before stated, to the forcible expulsion of the air from the lungs during a state of spasm of the muscles of the larnyx.

At 8 p. m., heart beats were 168 (pulse could not be counted at wrist), T. 105 $\frac{2}{10}$°. Perspiration very profuse to the extent that his clothing was saturated. Pupils widely dilated, and the whole countenance was that of a maniac. Drs. Crummer and A. B. Somers saw the patient at this time. Patient continued with his face to the wall, engaged in muttering, picking at the bedding, and spitting a thick, frothy saliva intermixed with a tenacious mucus, until the bed in the vicinity of his head was besmeared, so profuse was his expectoration. He was given at this time, 8:30 p. m., ½ gr. of morphine combined with $\frac{1}{80}$ of atropine which tranquilized him somewhat. The same dose with a half less atropia, was given at 9:30. But little effect was noticable from this. On the contrary he was very violent from 10 to 10:30, and he became so unmanagable as to almost make his escape from the house. Indeed, he got into the hall, when he was thrown upon the floor and bound with ropes, and when secured was put upon the bed and tied down. His struggles upon the bed for a few moments were most violent, but soon afterwards became so quiet that when I came at 10:40 I found him dead, having expired without the knowledge of the attendants, they having supposed him sleeping as the result of his violent exertions. Rigor mortis was already well marked, and cyanosis was extreme. There was no autopsy, because not allowed.

Mr. President, ladies and gentlemen, I have presented this case to you because impressed with the belief that it would be of at least passing interest, because of the rarity of the malady, as evidenced by there having been but one among the number who saw the case that had ever seen a case before, and the only others in town who had seen a case had seen the same referred to by the consultant. That is, the only case any had seen, was the one at St. Joseph's Hospital about five years ago. In the light of this revelation is it not plain that a denial of the occurrence of this affection can be quite successfully maintained with little danger of controversion. It is hardly necessary for me to refer to a notable example in this city. My hearers, I will not inflict you with extended remarks on this subject, I refer you to the books. "The result of rabies is invariably fatal, and usually occurs within three days after the appearance of the disease," (Wood's Ref. Hand Book,) there being no known cure after the outset of the acute symptoms. To Pasteur we are indebted for much of our knowledge of this affection. It is hoped that as much may eventually be realized from his preventive inoculation as was at first anticipated.

DIPHTHERIA—ITS TREATMENT WITH IODIDE OF SODIUM.

By A. J. Sanders, M. D., Grand Island, Neb.

Since May, 1882, I have seen eight cases of unmistakable membranous laryngitis survive the disease from saturation, or free exhibition, of iodide of sodium. Six of these cases were in my own practice, and two in the practice of Dr. John D. Jackson, of Doniphan. In a practice of twenty-six years, in which I have seen and combatted many bad cases of diphtheria, these are the only cases of well-marked membranous laryingitis I have seen recover, and I have seen many die.

In May, 1884, my own child, a boy, aged sixteen months, was taken with croupal cough in the night, which developed into labored and quick respiration within a few hours. I supposed that I had a case of ordinary catarrhal croup to contend with, but when morning came, an examination showed deposits of membrane on tonsils, and I believed I would lose my boy. In hunting up an armamentarium to battle with the disease, it occurred to me that I would try a free use of iodide of sodium for its germicidal qualities, and in hopes of promoting free mucous secretion and breaking up the croupal cough. I gave sodium iodide ʒi to aqua ℥i, teaspoonful every hour for ten successive hours, and the same was continued thereafter every second and third hour. In the afternoon and evening of the first day, the character of the cough changed, losing its stridulous character, respiration became easy, and to my surprise, in the afternoon of the second day, examination failed to find any vestige of membrane in the throat or on tonsils. The boy made a good and speedy recovery.

During the fall of the same year I met two more cases of membranous laryngitis, which I treated with the same remedy, both of which made a good recovery.

The first was a girl, ten years of age, having large deposits of membrane on tonsils, slight fever, marked croupal cough, and respirations 24 to the minute. There was hoarseness, and some labor of inspiratory act. In this case I gave ten grains every hour for twelve or fifteen hours, then I ordered its continuance every two or three hours. In less than forty hours the throat was free from membrane, and she rapidly convalesced.

The second case was a boy, four years of age. I saw him in the evening, being called to see what its father believed to be a case of croup. I found a patch of membrane on the right tonsil, the marked stridulous cough with labored inspiration. I gave a solution of iod. sodium hourly; found symptoms much improved the next morning, the cough had become moist, respiration easy. I called the morning of the third day and found the patch of membrane had disappeared from right tonsil.

The fourth case occurred in the family of Dr. P. J., of this place, in the winter of 1883-4. He came to my office in the morning, stating that his daughter, two and one-half years of age, had membranous croup; that the membrane was visible in the throat. I gave him my experience with iod. sod. He hurried home with a solution of ʒi to ℥i of the remedy, gave it through the day and night that followed. The next day he telephoned me that I could place another recovery to the credit of the iodide. This case I did not see. The clinical facts I believe to be correct as given by the doctor.

From that time I had no opportunity to see another case of membranous laryngitis until March of this year, when I was called to see a male child eleven months old, which was affected with membranous laryngitis. The throat seemed covered with membrane, lateral and posterior wall and even uvula. Its respirations were 68 per minute, with noisy, labored inspiration, the cough had the stridulous character so ominous in laryngeal complications. I gave this child hourly doses of ʒi iod. sod. to ℥i aqua, commencing in the morning. I gave an unfavorable prognosis upon leaving it. I was called into the country during the afternoon and did not call to see my case until the next morning. I did not expect to find it alive, but I must confess I was pleased to find it better, with resp tions under 50, and a marked dimunition of the deposit in the throat. I found the throat free from membrane the morning of the third day.

On the 18th of April last I was called to see a case in the town of Doniphan. Telegram stated diphtheria. I found my patient, a boy aged seven months, with membranous patch on left side of throat, marked croupal cough, respiration 64, and labored inspiratory act. I ordered him ʒi Iod. Sod. to ℥i, teaspoonful hourly until my return, if awake. I called the next morning not expecting to find my patient alive. Its father met me at the door giving me the good word that he and his wife believed the little one better, and were awaiting my coming to confirm their belief. I found respirations 44, much more easy in character, and the cyanotic, distressed condition gone. There was no evidence of any membrane on the throat. Parents stated the little one had had four hours rest in the latter part of the night. I saw this patient on Monday morning, my third call, and found respirations 32, child bright and nursing freely. It made a good but slow recovery, having a laryngeal cough for some time afterwards.

Within the last six weeks I have seen two well marked cases of diphtheritic larnyngitis in consultation with Dr. John D. Jackson, of Doniphan, that were treated with iodide of sodium, 10 gr. doses hourly for a number of successive hours. They both recovered. The Doctor has made notes of eleven or twelve cases in an epidemic now prevailing in that town and neighborhood, the history of which goes to show a remarkably rapid and early exfoliation of membrane under the use of this remedy. I will not enter into a discussion of his cases as he will offer the same for publication. Concerning these cases I would say that I believe that Dr. P. Janns' child and my own had membranous croup. The remaining cases were diphtheritic, as they occurred at times when diphtheria was prevalent.

Of fatal cases, I saw one in the fall of 1884, a girl of six years of age. I saw her at noon, ordered 10 gr. doses hourly for twelve or fifteen hours successively, and every two hours thereafter unless asleep. On making a call at 11 a. m. next day the parents showed a very large cast that she had expelled. When I first saw her, her respiration was so noisy that it could be heard in the yard. She died of heart failure, due to a succession of hemorrhages from the nares, but had no more apparent laryngeal oppression in respiration. Five other cases in this family made a good recovery using iodide of sodium.

A second fatal case came under my observation in May last, near the town of Phillips. The case was a boy aged five years. He had all the symptoms of diphtheritic laryngitis and lived but five hours after I saw him. In September after my return from Europe, the mother of this child called at my office and informed me that her babe, two years of age, contracted diphtheria after I had left home; that she had used the medicine I had left for her boy in the same doses; that her babe had the croupy cough and difficult respiration incident to the first child's case, and that it got well.

These notes of cases I have treated with the iodide I give largely from memory, but the clinical facts of treatment and recovery are correct. What I have found striking in the use of this remedy is the *early* and *rapid exfoliation of membrane*, and the fact that I have never seen it recur after disappearance. Dr. Jackson's experience confirms these facts. I believe that iodide of sodium will be found a germicide of remarkable power in these zymotic diseases which develop membrane on the mucous surfaces of the air passages. It has no sedative action on the heart like preparations of potassium and can be given in large doses. I have repeatedly doubled the dose in the early use of the remedy, and thus far have seen no unpleasant effect from it. I would be glad to know what the experience of others may be in these terrible and fatal membranous diseases.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

Dr. J. E. Summers, Jr.,
208 So. Fifteenth Street, Omaha, Neb.

USES OF THE TRANSFIXION LIGATURE.

At the late meeting of the Virginia State Medical Society, Dr. T. H. Manley read a paper on some of the uses of the transfixion ligature (*N. Y. Med. Rec.*) The author's investigation in this direction had been instigated by a case in which the transfixion ligature saved the life of his patient. While dissecting out tubercularly enlarged glands of the neck, suddenly a large stream of blood gushed out, which he was unable to control by pressure. The common carotid had been opened, and the patient was in imminent danger of exsanguination. Observing a needle with a ligature lying on the table, he hastily passed it under the tissues whence the hemmorhage proceeded, ligated the tissues, and at once the bleeding ceased. The patient was discharged cured after ten days. He then experimented with the transfixion ligature on the cadaver and on dogs, and found that injury to nerves or important parts was not likely to take place in the case of most of the vessels of the extremities, and if antiseptic precautions were observed, infection would be avoided. The ligature, of course, was only temporary, to be employed in urgent cases where vessels had been wounded by accident, or in operations in which it was preferable to render the parts bloodless by this method rather than by the Esmarch bandage, etc. He was convinced that the tranfixion ligature could be safely and easily applied to any healthy vessel in the external region of the body. Its use being only temporary, injurious results from suppression of function of parts included in the ligature would not be likely to occur; most was to be feared in this respect from its use on the large vessels of the neck, where important nerves might be included. Strict asepsis should exist. He had employed this method while operating for a femoral aneurism, and also in a case of epithelioma of the lip. In the latter instance it was of special value, since it completely controlled hemorrhage, which could not be done in any other way. The method had also been tested and proved efficient in secondary dressing of a wound of the wrist in which the radial and ulnar arteries had been divided. By its use many lives might be saved on the battle-field, now lost from primary hemorrhage.—*St. Louis Med. and Surg. Journal.*

LUMBAR HERNIA.

Mr. Jonathan Hutchinson, Jr., (*The British Medical Journal*, July 13th, 1889,) exhibited at the Pathological Society the only specimen of lumbar hernia in existence in London. It was obtained from an elderly and rather emaciated man, who died (from other causes) in the London Hospital. The hernia was about the size of one's fist, was situated in the left lumbar region, lying over Petit's triangle, and extending nearly from the last rib to the iliac crest, and it had existed for some years. It could be made to diminish markedly on pressure, was resonant to percussion, and had an impulse when patient coughed. Gurgling could be detected when reduction was made, returning when the pressure was taken off. It caused the patient no pain, and hardly any inconvenience. It was naturally thought that the hernia protruded through the orthodox triangle, but it was found, on dissection, that this was not the case, as the aperture, which would admit two fingers and was circular in shape, was really situated above and to the inner side of the triangle. The protrusion was, in fact, just outside the quadratus lumborum, through the transversalis aponeurosis and the latissimus dorsi, where the latter arises from the strong fascia covering the erector spinæ. Another interesting feature at the post-mortem examination was the absence of any peritoneal sac. The looseness of the attachments of the peritoneum in this region is well known, and is taken advantage of in certain operations, such as removing the kidney through a lateral incision. It was quite easy to make the peritoneum, by gentle pressure, protrude into the center of the hernial tumor, and, as it was certain that it had habitually during life contained intestine, it is obvious that every time the latter was reduced the peritoneal sac must have returned with it into the abdominal cavity. Whether this feature has been present in other cases of lumbar hernia it is impossible to decide, but it is one rarely met with in connection with the more common varieties of rupture.—*American Jour. Med. Sciences.*

The Omaha Clinic.

The Editor would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

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OMAHA, NOVEMBER, 1889.

THE article in this number of the CLINIC on the use of iodide of sodium in diphtheritic laryngitis, by Dr. Sanders, of Grand Island, deserves careful perusal and a fair trial by other members of the profession. As we understand it, the remedy is valuable in other cases of diphtheria besides those where there is known to be membranous deposits in the larynx or bronchi. Tracheotomy for croup is often difficult to perform, is dreaded by all interested, and is at best very uncertain in its results. When its days are numbered through the intervention of such a simple, safe and agreeable substitute as that under consideration, there will be general rejoicing. Let us hear further of this matter through the CLINIC. We understand there is more or less of the disease in Omaha, and that it is epidemic in some parts of the State.

⁂

WHAT has become of the typhoid fever we heard so much about one and two winters ago? Has the water in the wells been purified of its deadly bacillus by artificial or natural agencies, or are there no more subjects left in which these bacilli may germinate and flourish? Perhaps there is a dearth of news on this subject from want of a State Board of Health or laws on hygiene and vital statistics.

⁂

IN this connection we note the fact that Douglas County has just elected Dr. C. P. Harrigan as coroner. For years this office has been in the hands of politicians, and the medical profession has been entirely ignored. The Doctor went into the canvas against great odds, placing his claim on the ground that a medical man, all other things being equal, was best qualified for this office. We believe he was generally supported by the profession irrespective of politics, and using no dishonest or unfair means, he "got there," even though by a small majority. This is as it should be. In many cities within our own knowledge no one but a medical man is even thought of for coroner. This is a "reform" the medical profession may well encourage and support, and we are glad to see from *Lanphear's Kansas City Medical Index* that the subject is being agitated in Kansas. It remains now for Dr. Harrigan to vindicate his position by a model administration of the office.

⁂

WE have received the prospectus of a new medical journal to be issued about the 1st of January next at St. Louis, and edited by Dr. I. N. Love; price $2. We doubt not the Doctor will make good all he promises, and do even more. He says he "has a fondness for journalism"—that is one guarantee of his success. The man who loves his work will usually get to the top if he has perseverence added. We advise all our readers, after they have subscribed and paid for the OMAHA CLINIC, to send $2 to Grand Avenue and Lindell Boulevard, for the *Medical Mirror.*

INCUBATORS.

Since the publication in our October number of an article upon a *conveuse*, or baby hatcher, we have received a number of journals and articles containing allusions to and descriptions of incubators. The design of this attention is evidently to draw our attention to priority. We beg to submit that we were fully apprised of the existence of these papers and the designs therein contained. The author expressly states that it was the practical realization of a most happy thought for A. Auvard to describe his "*Nouvelle conveuse pour la clientele privee*" in 1883 The incubator of Fuerst is certainly a continuation of the good work of Auvard. Our author recognizing the fact that soapstones retain for a long time heat imparted to them, suggests their substitution for the *tiles* of Dr Fuerst, which cannot be procured in this country.

Certainly *this* suggestion, as well as the description and design of Dr. Fuerst's con_ veuse, belong as regards priority, to our author and to the OMAHA CLINIC.

Nor is this all. Incubators have been used by public institutions and the favored few since Farnier in 1881 had Ovile Martin make one for him. And some form or other of artificial warmer for weak babies has had existence since necessity compelled loving mothers to invent such makeshifts. The medical profession has assisted them really only by progressive means since the time of Professor von Ruehl, (1835).

Now the intrinsic merit of the paper in our October number, well recognized by the members of the Medical Society of the Missouri Valley, before whom it was read, was the forcible description of so simple a design for this much needed *armamentum obstetricum*—that henceforth it is no longer pardonable for the accoucheur to take a weak, prematurely born mortal and wrap it in a wet towel or apron and lay it aside to take care of itself—which it generally does by taking its flight into another world from its uncongenial surroundings; but not without the protest sounded by its pitiful moan, that a little care in conjunction with a cracker box, a few nails, a hammer, a saw, a few soapstones, a few hooks, and a bit of wire, procurable in every corner grocery and the adjoining hardware store, might have made this world a congenial one and saved to itself a worthy denizen.

AMPUTATION IN LESIONS OF THE KNEE JOINT.

There are probably few perplexing questions more difficult for the surgeon to decide, than this: When should amputation be the preferred or demanded procedure in lesions of the knee joint?

The experiences in war before and within the period of the rigid use of antiseptics, have apparently proven that excision in gunshot wounds of the knee joint should rarely be practiced. Longmore says: "From all the experience which has been gained regarding gun-shot wounds in which the knee joint has been opened, especially if the surfaces of the bone have escaped damage, as may occasionally happen with modern narrow rifle bullets, and even in other cases where one of the bones has been fissured, or partially, and fracture has occurred, provided early immobilization of the injured parts can be secured, antiseptic treatment carried out and the general surroundings are sufficiently hygenic, it may now be laid down as a rule that conservative treatment ought to be adopted." He also states that when the injury is more extensive, and when it is impossible to carry out the above indications, "amputation above the joint is the only measure calculated to afford a fair promise of safety of life to the patient."

When, however, the subject is one of disease, and not of injury, amputation should be the last thought of and much-to-be-fought alternative. All forms of knee joint disease (except Charcot's and osteo-arthitis) can usually be successfully managed on the principle of rest, or rest with extension—some require aspiration, or incision and drainage. Usually this practice is followed by good results, but when it fails, and disorganization more or less complete, has come about, some other form of operative practice is demanded. Space does not permit a review of the whole field of diseases of the knee joint coming within this category, so we will brifly confine our views to one, by far the most common, tuberculosis.

No attempt at a typical resection should be made in children under ten years of age, as it has been found by experience that even where the epiphyseal cartilage of the femur was not injured by the surgeon, although the operation was at first apparently a brilliant success, yet time proved that the limb did not grow with its fellow, and great deformity frequently followed. Kœnig and Kocher have had many experiences of this kind, and the latter tells of one case of a six year old child whose knee joint he resected without injury to the epiphyseal cartilage; for one and one-half years the shortening was 2-3½ cmtrs., later it increased to 9 cmtrs.

In all cases, even up to and including twelve years of age, when conservative methods fail, it is best both as regards danger to life, and the prospect of cure with a servicable limb, to confine operative measures to the use of the knife, sharp-spoon and scissors for the removal of diseased tissues, remembering that nature in about 33 per cent. of these knee-joint lesions brings about a cure, which, we, by our operation, merely aim to shorten.

From twelve to twenty years of age is the time most favorable for resection. It is the period which experience has proven gives the best results, curative and functional. After thirty years of age resection commences to show bad results, and after middle life should never be performed.

Amputation should be done in extensive disease after failure of the partial operation; and in all cases when there is indication of the tuberculous process having invaded internal organs, provided of course this has not progressed too far.

Amputation should always be performed in patients past middle life, when it is a question of any operation, and when the local lesion at any age has so sapped the vitality of the subject that repair is impossible. The removal of the limb in such cases is the highest conservatism.

THE reviewer of the Pocket Record and Prescription Book, put on the market by the publisher of the OMAHA CLINIC, lays stress upon the copying leaves contained in the prescription blank books. A prominent physician of Nebraska relates to us the following: "You know I am very orderly in my professional business, so much so that my intimate friends have for me the sobriquet 'Old maid.' Well, among other habits which I cultivate is the one of taking a copy of every prescription I write, and to make it a *legal copy*, I use transmission paper. This I have practiced constantly since 1879. Several years ago a large corporation was sued for $10,000 by a party upon the claim of having received injuries upon the promises of the company. It was ascertained that the claimant had consulted me immediately succeeding the time when this supposed injury was said to have been sustained. The case was tried about a year ago. I turned to my copies of prescriptions and found that the party had consulted me for chronic constipation and a subacute pharyngeal catarrh, for which the well-known aloin, bellad. and strich. pill was presbribed on the one hand and upon the other a solution of tannic acid and a steam atomizer. No allusion was made at the time of the consultation to any injury real or supposed, nor was relief sought for it, as shown by the copy of my prescriptions. The prescriptions were given in 1884! This experience has made me a more enthusiastic copyist, and I cannot see how any physician, who lays the least claim to precision can do without it."

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

Holds its next regular meeting December 19th, at Sioux City, Iowa. It is expected that large accessions will be made to the membership of this society from the ranks of the profession in the new territory to which we are going. We would suggest to the Sioux City members the importance of a personal interest and exertion on their part in bringing to the attention of physicians throughout the contiguous sections of Iowa, Minnesota, Dakota and Nebraska, the merits and claims of our young, thrifty and prosperous society.

Those members intending to read papers should not forget the necessity of sending titles of papers to the Secretary at once. Notices of the meeting will be sent out about November 20th. A second notice will be mailed one week before the time of meeting.

The last meeting was a success in every particular. See to it that the coming meeting is one to be proud of, likewise.

Correspondence.

EDITOR OMAHA CLINIC: The following case was of considerable interest to me for the reason I am unable to find an account of anything like it. While it may not be so extremely rare, I think it may nevertheless be of interest to others as well as myself.

A. L., who calls himself "The California Boy Preacher," while on his way from California to Ohio, stopped at this place about September 1. He is about 20 or 25 years of age, medium sized and ruddy complexion, with light hair and eyes. He is considerably deranged mentally, caused, as I believe, by religious excitement. He is, as I am told, well versed in theology and the Bible, and quite sane and very enthusiastic on those subjects, but seems to be more insane on other things.

September 1st he was walking along the street when suddenly he fell, "as if he had been shot," as described by the only man in sight at the time. A crowd soon gathered around him, myself among the rest, as he was near my office. I found him lying on his back with arms extended at nearly right angles to his body and his legs somewhat separated, eyes closed, respiration normal, pulse 64 and regular, pupils normal. There were no signs of convulsions, except of the orbicularis palpebrarum muscles. The muscles of the extremities were in a state of tonic contraction. On attempting to bend any of the joints I found it impossible to do so more than to a slight extent. With the aid of the bystanders, I removed him into the shade and waited for him to recover without any attempt at the vigorous treatment which some present thought was indicated. As might be expected, I was asked immediately for a diagnosis. My reply was hysteria, which was received with some incredulity, as the case was so different from what the laity understand as hysteria.

After about five minutes, he suddenly began to move and soon opened his eyes and sat up, like a person awakening from sleep. He complained of hurting his shoulder when he fell and that he felt tired, but otherwise he said he felt as well as usual. He said he was perfectly conscious all the time and knew all that was going on around him, but was unable to speak or move. He got up and started away and when out of sight of all but one or two he fell again, and the same thing was repeated in every respect as before. After recovering this time, he said he had been subject to such attacks for some time, and that in the morning of the same day he lay in that condition two hours and a half, which I learned from others was the case. He said he used to have convulsions in which he was also conscious, but they have given place to the present condition.

He went from here to Lincoln to the state fair with his uncle of this place, and while on the fair ground had an attack. His uncle said in his presence that he would go and get a wagon and take him to the hospital, when he immediately got up and started away. When asked not to go away he replied, "You don't get me into the insane asylum again," from which it may be inferred that he was an escaped inmate of some asylum, although his uncle did not know. He was soon lost in the crowd, in spite of the efforts to follow him, and has not been seen by his uncle since, but word has come from relatives in Iowa, where he has since been, that he still has the same attacks, and in one case he fell on a railroad track, and lay there until a train came within a few feet of him and the engineer got off and removed him. He was conscious and knew that a train was coming, but could not move. I have also heard that another doctor has made the same diagnosis as myself. One physician to whom I mentioned the case, was inclined to believe it feigned, but I am not; I still adhere to my first diagnosis. As I have occupied enough space, I will leave the case without any comments, and if any reader of THE CLINIC wishes to make any I shall be glad to hear them. A. C. AMES.

OXFORD, NEB., NOV. 16.

Surgical Progress.

THE SURGERY OF THE SPINE.—Dr. J. William White (*The Annals ot Surgery*, July, 1889,) reviews the history of spinal surgery from early times to the present day, discusses the arguments for and against operation in the three great classes of spinal disease, in which operative interference may be thought of—viz., traumatisms, caries, and neoplasms—and comes to the following conclusions:

1st. The objections urged against operative interference in spinal traumatisms were partly theoretical—hemorrhage, frequency of absolute destruction of the cord, pressure from inaccessible fragments of bone, etc., and have been shown to be unsupported by clinical facts; and were largely due to a well-grounded dread of, (*a*) the shock, in those cases operated on in pre-anæsthetic times; and (*b*) consecutive inflammation, suppuration, and pyæmia in pre-antiseptic periods. The later results, which now constitute our only safe basis for generalization, are distinctly encouraging, and resections of portions of the vertebræ, in fractures, possibly even in dislocations, should be recognized as an eminently proper operation, and in suitable cases altogether warranted by the facts in our possession; and, further, such cases are by no means rare or exceptional.

2d. There can be still less doubt that the testimony of both pathologists and practical surgeons indicates that the causes of the paralysis of Pott's disease is in many instances an extra-medullary proliferation of connective tissue, assuming the density and proportions of a neoplasm, occupying the space between the dura and the anterior surface of the laminæ, not apt to be associated with intra-medullary changes or with destructive degeneration of the cord, and very frequently removable by operation.

3d. Every case of focal lesion thought to depend on a tumor and not distinctly a malignant and generalized disease, should be regarded as amenable to operative interference, no matter how marked the symptoms of pressure may be, nor how long continued.

4th. The method of extension as recently revived is well worthy of preliminary trial in the first two classes, in obscure cases thought to belong to the third class. It has not yet been tried in a sufficiently large number of cases to establish its exact limitations, but it is unquestionably a therapeutic measure of vast importance in spinal injury and disease.

5th. It is customary and proper in deciding upon any serious surgical procedure, involving risk to life, to consider well the prospects of the patient in the event of non-interference, and to be largely influenced by them. Looked at in this light, the surgery of the spine, as regards traumatisms, caries, and neoplasms, may fairly be said to have a rapidly widening field, and to deserve more serious and careful consideration by practical surgeons than it has received for many years.

Drs. F. X. Dercum and J. William White (*Ibid.*, June, 1889,) reported two cases of resection of the spine. One died soon, but the other, who had been for many months a hopeless paralytic, and who was rapidly failing in general health before the operation, is now (October 6, 1889,) walking about the ward unassisted and in excellent general condition. —*Ibid.*

NON-STRANGULATED HERNIA.—By Mitchell Banks, (*The Lancet*, London). The author divided non-strangulated hernia into two groups:

1. Moderate-sized herniæ.
2. Very large and enormous herniæ.

This has been done because they are by no means on the same footing either as regards danger to life from the operation or liability to recurrence of the rupture. In the statistics which he gave the terms were used in the following manner:

By "quite sound" is meant that the rupture has never come down since the operation, that there is nothing in the way of swelling to be felt or seen, and that there is no impulse on coughing. By "partial success" is meant that the rupture has slightly returned, or threatens to return if unsupported, but that, with the aid of a truss, the patient is in safety and comfort. In many of these cases no truss at all would keep the bowels up before operation, while after it support could be effectually given. In every instance the patients placed in this catagory declared that they were in a distinctly better position after the operation than before it. By "complete failure" is meant that the rupture is as large and troublesome as before the operation.

Among the fifty-nine moderate-sized non-strangulated herniæ two deaths are recorded. One was distinctly due to the operation. The other was doubtful, as the wound was all but healed, and there was no peritonitis or other lesion relating to the wound found after death. Of the sixteen very large and enormous herniæ four cases proved fatal. Septicæmia killed two patients, and unsuspected abscess, bursting into the peritoneal cavity after the patient was walking about and deemed sound, proved fatal in another, while in one case the operation could not be completed. Of the twenty-two cases of strangulated inguinal hernia, one, an old man of 77, died from septicæmia and bronchitis. Of the nineteen cases of strangulated femoral hernia, two died, one never recovered from the collapsed state in which she arrived at the infirmary, and another was moribund when admitted. The statistics of permanence of cure, showed that, of the one hundred cases of moderate-sized non-strangulated and strangulated herniæ combined, it has been possible to trace for very considerable periods seventy-seven. Of these, forty-eight remain quite sound, seventeen are partial successes and twelve are complete failures. Of sixteen cases of very large and enormous herniæ it has been possible to follow up ten. Of these, five remain practically sound, though all require some support to prevent return; three are partial successes, and two are complete failures. He further remarked that removal of the sac was best because of its simplicity. He was himself inclined to operate upon those who wore a truss; but, in any case, removal of the sac was essential and repaired the irregularity of the peritoneum. He practiced stitching of the rings, but it was of less importance. Umbilical herniæ contained so much adherent omentum and bowel that they were seldom suitable for operation.

Mr. Thomas Bryant's (London) experience of those cases in which the sac was removed was that they succeeded best. After kelotomy the operation could not be considered completed until the sac had been removed. Opertions in children were to be avoided, except where a truss could not be worn. Opening the sac almost quadrupled the risk. In adult life operation was unadvisable when a truss could be worn. Large herniæ ought to be left alone; he had occasionally been obliged to operate upon them, but a truss must be worn afterwards.

Mr. Kendal Franks (Dublin) agreed that an operation was necessary in adults who could not wear a truss; also in adults who were athletes. A truss was a great detriment. He always, in operating, sutured the neck of the sac and the internal ring. The operation of twisting the neck of the sac could not be applied in cases where the cord was adherent to the sac. Strict antisepsis essential to success, and good results were obtained either with silk or silver wire. His bias was in favor of operation. In forty cases he had had four returns.

Mr. Edmund Owen (London) also was unable to speak definitely of the results. He could only say that he was satisfied with the result of his operations up to the present. He had operated on a good many children, but he entirely agreed with Mr. Banks that children should not be operated on unless the hernia was absolutely beyond the control of a truss; for it was an undisputed fact that, with a fair chance, children did "grow out of" their inguinal weakness. The cases which he preferred for operation were those of adults whose inguinal herniæ were associated with an atrophied or an undescended testis. In such cases the surgeon should remove the useless gland without compunction, and, having ligatured and pushed up the cord, should completely occlude with sutures the inguinal canal. The objection against the removal of the undeveloped testis was purely sentimental, for the gland was, almost for certain, of no physiological value. He did not believe in the surgeon being able to recognize during the operation, the "internal abdominal ring" and the "conjoined tendon;" at any rate, though he knew them in the dissecting room, he ignored them in the hospital. He thought that it mattered little in the permanency of cure whether the surgeon used silver, gut or silk for closing the canal; but he would ask Mr. Banks how he dealt with the sac of that variety of hernia which descended with the tunica vaginalis. He was satisfied to tie the funicular process high up, flush with the peritoneal wall, so as to leave no depression to invite the subsequent descent of the bowel; he then divided the process below the ligature, and removed an inch or so of the testicular part of it. He did not believe in the desirability of fashioning an artificial tunica vaginalis; all that might be left to nature. The point on which he specially desired to join issue with the author of the paper was as regards the subsequent wearing of a truss. If the neck of the sac was obliterated and the inguinal canal thoroughly closed, no bowel could descend, and the truss, therefore, was unnecessary. He always opposed the use of a truss after the operation, for he had a strong opinion that the constant pressure of the pad went a long way toward promoting the absoption of the plastic material which was thrown out in the neighborhood of the ligature and sutures, and the definite organization of which had a considerable influence in establishing the permanency of a cure.—*Annals ot Surgery.*

GUNSHOT WOUNDS OF THE INTESTINES.—By T. A. McGraw, M. D. (Detroit). The author has collated the literature of this subject with care, and has made a number of experiments upon animals, from which, together with his own experience with the accident in the human subject, he has deduced his opinions. He considers that:

1. That the gravity of an injury of this kind depends partly upon the missle.

2. Bullets which enter the abdominal cavity pass in a nearly absolutely straight line from tne orifice of entrace through the peritoneum to that of exit, or to their final stopping place in the viscera. The author is inclined to think that the whole doctrine of balls glancing from soft tissues is a fable founded upon imperfect observations and wrong deductions.

3. An incision made directly in the course of the ball will give the shortest route to the injured parts.

4. The contents of the bowel may be made to discharge through an open gunshot wound by manipulation and pressure. If such a wound will not act in this manner, it is because it has already been closed by the eversion of the membrane or by the exudation of the plastic lymph; in either case the wound would probably recover without suture if kept properly aseptic, provided that the bowels are kept perfectly quiet.

5. An empty condition of the alimentary canal is the most favorable to healing.

6. Agglutination and limitation of the morbid process consequent upon gunshot wounds of the intestines may take place as eurly as the sixth day.—*Ibid.*

Medical Progress.

THE INHALATORY TREATMENT OF PHTHISIS BY MEANS OF SUPERHEATED AIR.—(By Alex. Bowie, M. D., M. S. — From *The Lancet*, London, England, Sept. 14, 1889.)—In order that the bacilli of tubercle may abundantly flourish, a temperature of 99° is a necessity. If the temperature be lowered to 94° or raised to 107.6° they are rapidly killed, their vitality diminished as we recede in either direction from their normal point. Such a trivial raise as 3° above the normal temperature, is sufficient to markedly retard their developmental energy. With these facts in mind it is somewhat strange that, until recently, no one should have suggested a method by which diseases of the human being, associated with or dependent upon the bacillus of tubercle, might be treated by exposing the diseased surface to a temperature necessary for their destruction. The inhalatory treatment of phthisis is as old as Hippocrates, and apparently every conceivable method has been freely used, with the exception of superheated air. We have had fumigations with aromatic and stimulating substances, ranging from sea air to sulphurous waters, from pine cones to elaborated combinations of balsamic herbs. With the birth of chemistry the physical properties of the air received attention, and Henshaw crystalized the thought of the time by erecting, in 1664, his Domicilium, where acute chest diseases were treated by condensed, and chronic by rarified air. The inhalation of oxygen was followed by treatment with diluted air, and finally phthisical patients were recommended to spend a considerable portion of their lives in diving bells, to obtain the advantage of compressed air. The intoduction of sprays of medicated and natural thermal waters, marked another advance, but each system fell more or less into disuse from insufficiently satisfactory results. My experience with the inhalation of superheated air has, so far, yielded results of a very favorable nature. The apparatus used was Weigert's, in which the temperature expired by the patient, after a few trials, may reach 120° to 140°. The inspired air, according to the thermometer in the tube, may be as hot as

570°, but I do not think the actual inspired air is ever hotter than from 280° to 300°.

In February, 1889, I was consulted by a married man about 27, who had been ill since 1885. He had suffered from recurrent attacks of hemoptysis, and had expectorated as much as thirty ounces of blood in three days. He had cough and profuse muco-purulent expectoration, containing abundance of tubercle-bacilli. There was loss of appetite, nausea, and vomiting in the morning, marked wasting of the body and shortness of breath, with inability to lie down in bed. Both apices gave the physical evidence of phthisis. The first effects of the inhalations were a slight rise in temperature, generally about half a degree, increased rapidity of the pulse rate and diminished frequency of breathing. These lasted from one to three hours after inhalation. The cough and expectoration were increased, but showed signs of abatement after four weeks' treatment. His morning nausea and vomiting from the first disappeared, the appetite improved, his rest was less disturbed and his sleep more refreshing. His sputum, as it diminished in quantity, contained relatively less of the bacilli. At the present time there is no regular cough and expectoration is absent. He complains of no shortness of breath, there is an increase of four pounds in body weight, and the chest girth is believed to be larger. His appetite and digestion are good, and he can lie down just as before his illness, and he performs the ordinary work of a shopman without any particular discomfort or consequent exhaustion. There are still present slight consolidation of his left apex, with slightly prolonged expiration, but these have diminished in a continuous line. During the treatment no medicine was prescribed. Cod liver oil had previously been abandoned on account of gastric intolerance, but this was resumed three months ago, and has always been retained.

Since the improvement in the above case became marked, I have not hesitated to advise the treatment in several others, in each of which improvement in the disease and comfort of the patient have occurred. But the one case is, I believe a sufficient reason for calling attention to a new and most hopeful means of treating an intractable disease.

Uterine Diseases Treated by Heat and Cold Over the Spinal Cord, and Sympathetic Ganglia. — Dr. Kinnear, of Boston, bases the use of heat and cold (*Annals Gynecology*) in uterine diseases upon the fact that these agents applied over the spine and sympathetic ganglia enable us to control the blood supply of the uterus, the cold dilating and the heat contracting the arterioles. Heat over the lumbo-dorsal region controls the flow of menorrhagia, but the hot bag should not be used until the loss of blood has gone beyond the physiological point. The bags used are filled with water at a temperature of 115° 120° F. and constantly applied until the discharge lessens, refilling every hour unless good results. The checking of the flow is not the only good effect, because it is found that the pain in the back and the sense of uneasiness vanish, and the patient passes into a refreshing sleep, In speaking of post-partum hemorrhage, the author writes: "I believe that heat on the lumbar sympathetic ganglia will contract the uterine vessels, but if also placed across the spinal cord will, by attracting a surplus of blood into the motor cells of the cord controlling the womb, induce strong contraction of the uterus by the stronger nervous currents issued to its muscular fibres by way of motor nerves."

Dr. Kinnear applies the Chapman system to abortion also, the manner of its use being explained in the following case: The patient, eighteen months previous; had miscarried at six months and a half, while suffering from rheumatism. Becoming pregnant again, everything progressed favorably until the third month, when she was attacked by labor pains and a sense of weight in the uterus. The abdomen above the womb was also quite hot. The pain was frequent and the patient was very nervous and uneasy. A double-columned hot water bag was applied over the dorso-lumbar region and the patient put to bed. In fifteen minutes she expressed herself as more than comfortable. The bag was removed at the end of an hour and a half; it was renewed in four hours and so continued for the following day. The second day the pains, heat and weight had entirely disappeared, and the bag was used on the third day only twice. The patient was then allowed to rise and had no further trouble through the whole period of gestation, taking plenty of quiet exercise and enjoying life.

The ice bag appplied over the lumbo-sacral region dilates the arterioles and is therefore indicated whenever .this object is to be attained, as in dismenorrhœa.

The following case is cited: In the spring of 1882 I was called to Miss M., 18 years of age. The period was beginning, as usual, with great pain, both in the region of the uterus and also in the lumbar regions of the spine, shooting upwards through the dorsal region. The patient was making a great outcry; the feet and hands were cold and the face much flushed. Instead of morphia, which I was requested to use hypodermically, a dorso-lumbar ice bag was placed over the dorso-lumbar region. In a few minutes the cries ceased and the face began to lose its flush. In about forty minutes the feet and hands were quite warm, while the patient expressed herself as perfectly comfortably. She fell asleep and, after several hours' nap, woke with a fair flow and entirely free from pain.

DR. PAUL PAQUIN, of Missouri, has successfully inoculated animals with attenuated virus of Texas fever, rendering them completely safe from subsequent infection. At a trial of eight cattle sent into an infected locality, after having been inoculated, along with eight that had not been inoculated, the uninoculated all died, while the inoculated remained well. We hail with pride the success of our enthusiastic young scientific investigator.—*Kansas City Med. Record.*

IN THE *British Medical Journal*, Dr. John Brown speaks of apomorphine as "the emetic *per excellence* for children, when given hypodermically." He prepares his solution as follows:

℞ Apomorphin. mur......................gr. j.
Sp. vini rect.................................m. 20.
Aquæ..m 110.

Each 10 minims equals one-twelfth of a grain of the alkaloid. The dose for hypodermatic injection varies from 2 to 10 minims; the patients ranging from 14 months to 30 years of age in the cases reported.

Reviews.

THE OMAHA CLINIC RECORD, PRESCRIPTION BOOK AND EMERGENCY CASE.—Designed by A. S. v Mansfelde, M. D. H. J. Penfold, publisher, Omaha, Neb.

This unique pocketbook, or case, truly deserves the name of "*multum in parvo.*" It is the growth and experience of a quarter of a century's active practice, both in the city and country. It measures 6½ inches in length, by 3½ inches in breadth, and is made of the best morocco leather. One side of the cover has a pocket attached to it for cards, checks, passes, etc. The opposite side is arranged into a miniature instrument case, designed to hold a double-bladed knife, (scalpel and bistoury), a pair of forceps (dressing and needle forceps combined), a pair of scissors, probe, catheter, a hypodermatic syringe with place for two needles and four tubes for tablets. Between the covers, thus utilized, two small books are so placed that they can be removed at will and replaced by new ones, thus making the book a perpetual one. One of the books is a *prescription book* arranged for prescription blanks and copying leaves. The reverse of each copying leaf contains memoranda of a complete clinical record of the case, for which the prescription upon the reverse side was given. The *Record Book* is so arranged that it can be used for any period of the year, and for as many patients, as fortune favors the physician with; besides this, space is supplied for *debits* and *credits*, and the arrangement allows of a ready entry of all business of whatever nature. This book is interleaved by pages containing, upon one side, data, which are ever needful, such as: Tables to find day of confinement, for signs of pregnancy, of dentition; thermometer scales, compared; examination of urine; artificial respiration; treatment for asphyxia from various causes; poisons, their diagnosis and treatment; incompatible drugs; dangerous compounds of drugs; emergencies; table of doses of most remedies, etc. Whilst the reverse sides of these leaves are left blank for memoranda. Linen paper is used, thus compressing the book to the smallest size, yet not interfering with firmness of texture and beauty of design. This medical *necessaire* wants to be carried in the pocket for awhile to be fully appreciated. Price: Fine morocco covers with space for instruments, $4.00; fine morocco covers for books only, $3.00.

THE NERVO VASCULAR SYSTEM, IN THREE PARTS.—Arranged by W. Henry Price and S. Potts Eagleton. Examined and approved by John B. Deaver, M. D., Demonstrator of Anatomy, University of Pennsylvania. Published by F. A. Davis, No. 1231, Filbert street, Philadelphia, Pa. Price, 50c a set.

These are charts 18x22 inches, made to be framed or mounted on canvas, and hung on the wall for convenient reference. Part I contains the cranial, spinal and sympathetic nerves, with their names, function, origin and principal distribution. Part II has a like arrangement of the arteries, and Part III, of the Veins. Such charts are very valuable to the teacher and student as a method of instruction, and to the busy practitioner for aiding the memory.

THE CENTURY DICTIONARY.

RECEIVED from Van Husen & Chapman, General Agents for Iowa, Nebraska and South Dakota, Sioux City, Iowa, the prospectus of the CENTURY DICTIONARY, an Encyclopedic Lexicon of the English Language, prepared under the supervision of William Dwight Whitney, Ph. D., LL. D., Professor of Comparative Philology and Sanskrit in Yale University. Published by the Century Company, New York.

The Century Dictionary is published exclusively by subscription and in twenty-four parts, or sections, the whole consisting of about 6,500 pages, to be finally bound in six quarto volumes. The cost is $2.50 a section. They will be delivered monthly, or four sections every four months, as desired by the subscriber. Subscriptions to the Dictionary are taken by agents, but since many persons may not wish to wait until an agent calls upon them we will receive subscriptions sent directly to us, and will request the agents to supply the parts. If subscribers cannot be promptly reached in this way, we will send the parts directly from this office as they are issued.

This work is an encyclopedic dictionary designed to give both precise definitions of terms and more or less extended accounts of the things which they denote. It has been written by specialists and with the design of securing both accuracy and the highest practical utility.

Special attention has been paid by the editors to the theological and philosophical sciences, with reference both to matters of doctrine and of historical fact. In theology the attempt has been made to define all terms not only with fairness, but with an intelligent appreciation of the views of those whose doctrines they denote: thus, the definitions of words used in special senses by Anglicans have been sought from Anglicans; those used by Catholics, from Catholics; those used by Baptists, from Baptists, and so on, the special point of view presented being always stated. Where the same word is used by different sects or schools with different meanings or shades of meaning—as, for example, *atonement* or *inspiration*—a definition sufficiently comprehensive to include all the various shades of meaning has been given first, wherever this is possible; and then the important variations of meaning are noted, often with citations from recognized authorities. In the words thus treated will be found the entire English vocabulary of the theological sciences. Definitions, often elaborate, are given of terms designating vestments, ornaments, rites, and ceremonies, of words relating to church architecture and church music, etc., etc. In this collection is much that is new and interesting about the ritual and customs of the Greek church and related matters. Systems of religion other than the Christian, as Mohammedanism, Confucianism, etc., are treated with considerable detail, as are also the more simple and barbarous forms of religious thought, and the many related topics of anthropology. Church history is treated under the names of the various sects, etc., and it is believed that few words relating to this subject, or to those above mentioned, will be found in any course of reading of which THE CENTURY DICTIONARY does not give a careful and often very full account.

Metaphysical, physiological, ethical, and logical terms have been defined with reference not merely to their current meanings, but to their history from the time of Plato and Aristotle, through the period of scholasticism, to the present day. The philosophical riches of the English language have never been so fully exhibited in any work of the kind. How extensive these riches are, and how valuable in numberless ways is a precise acquaintance with them, is well known to all to whom the work of the older philosophical writers and of their modern successors is familiar. Both the oldest philosophical uses of words and the most recent additions to the vocabulary of psychology, psycho-physics, sociology, etc., are to be found in the pages of THE CENTURY DICTIONARY. The definitions of common words, also, have been prepared with a clear understanding of their possible philosophical or theological implications. Special care has been devoted to the defining of logical terms.

The definition of ecclesiastical terms have been prepared by Dr. Lyman Abbott with the assistance of other eminent divines and scholars; those of anthropology and related topics by Prof. W. D. Whitney; and those of logic and philosophy by Prof. C. S. Peirce and others.

The etymological history and relations of words are matters of great importance to students of theology and of philosophy. In this department THE CENTURY DICTIONARY is unrivaled. Its etymologies, which have been written under the supervision of the editor-in-chief, *the most distinguished philologist of America*, are more elaborate than any that can be found even in special dictionaries, and have been so constructed as to be practically useful, in numberless ways, to every student of the language.

THE CENTURY CO., 33 East 17th St., New York.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY, TWENTY-FOURTH ANNUAL MEETING.—Held in Kalamazoo, June 9-10, 1889.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY, NINETEENTH ANNUAL CONVENTION.—Denver, June 18-19, 1889.

PROCEEDINGS AND ADDRESSES AT A SANITARY CONVENTION.—Held at Otsego, Michigan, May 2-3, 1889.

Also a similar convention held at Tecumseh, Michigan, June 6-7, 1889. Both under the direction of the State Board of Health.

A YEAR'S EXPERIENCE WITH APOSTOLI'S METHOD.—By A. Lapthorn Smith, B. A. M. D., Lecturer on Gynæcology, Bishops College, Montreal. Reprint from *American Journal of Obstetrics* August, 1889.

PROLAPSE OF THE WOMB, WITH SPECIAL REFERENCE TO THE SO-CALLED HYPERTROPHIC ELONGATION OF THE SUPRA-VAGINAL PORTION OF THE CERVIX.—By Lewis H. Adler, Jr., M. D. Reprint from the *Medical News*.

URINARY CALCULUS AND LITHOTOMY.—By Thomas W. Kay, M. D., Scranton, Pa. Reprint from the *Maryland Medical Journal* March, 1889.

REFORMATION IN THE PRACTICE OF MEDICINE BY THE DOSIMETRIC METHOD OF PRACTICE.—By J. E. MacNeill, M. D., Denver, Colorado, Reprint from *Dosimetric Medical Review*, July, 1889.

THE RADICAL CURE OF HAY-FEVER WITH CHROMIC ACID.—By A. H. Lee, Philadelphia, Pa, Reprint from *The Medical News*, Oct. 12, 1889.

The following reprints by Charles Warrington Earle, M. D., Chicago, have been received: "Antiseptic Obstetrics." "The Influence of Sewerage and Water Pollution on the Prevalence and Severity of Diphtheria." "Observations in Vienna." "Infant Feeding." "Cirrhosis of the Pancreas, or Pancreatic Anæmia." "Cephalæmatoma of the New Born." "The Treatment (Not Preventive) of Puerperal Fever." "Retained Debris, as one of the Causes of Puerperal Fevers." "Address Delivered at the Thirty-Ninth Annual Meeting of the Illinois State Medical Society, May 21, 1889."

Publishers' Page.

L. C. Carr, M. D., Professor of Obstetrics Cincinnati College Medicine and Surgery, Cincinnati, Ohio, says: "I have given Papine (Battle) a fair trial and am well pleased with its action, especially so in the case of an infant suffering with an attack of convulsions. Its action was speedy and safe."

In prescribing the products of manufacturing pharmacists, we should be guided to a great extent by the business standing of the manufacturers. No house in the south or west has a better reputation for strict integrity than the firm of R. A. Robinson & Co., Louisville, Ky. We do not hesitate to recommend the preparations advertised by them on page xii, this issue.

Arsenite of Copper Tablets, 1-100 Grain.—An article by Dr. J. Aulde on the application of arsenite of copper in bowel affections, and especially in the diarrhœa of typhoid fever, was published in the July, 1888, *Therapeutic Gazette*. The results obtained by this investigation were so favorable to this remedy that Parke, Davis & Co. added to their list of tablets a 1-100 grain arsenite of copper tablet, which makes a convenient method of preparing the solution commended by Dr. Aulde. One tablet should be dissolved in three, four to six ounces of water, of which the dose is a teaspoonful. Reprints of Dr. Aulde's article furnished physicians by Parke, Davis & Co. on request.

Kansas City, Mo., Oct. 28, 1889.—Chas. Chadwick, Ottis R. Wyeth, Louis A. Schoen, Geo J. Schoen, Chas. F. Herrmann, Geo. Eyssell and Horace L. Roy, druggists of this city, were brought before Judge Worthen to-day, and each fined $500 and costs for counterfeiting a trade-mark preparation, known as BROMIDIA.

The Empire Elastic Bandage is specially adapted for varicose veins and surgical uses, is elastic porous, and absorbent, and the finest bandage now on the market.

"Its elasticity, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, is a feature unknown to any other bandage."

"The only bandage that is superior to the elastic stocking for varicose veins."

Offensive Odor of the Breath, due to bad teeth or other causes, may be overcome, or at least greatly abated, by the habitual use of Listerine. Add a teaspoonful to a tumblerful of water for a mouth-wash and gargle, and if a little is swallowed, so much the better. Indeed, a bad breath is not unfrequently caused by the gaseous eructations of indigestion, and for this also Listerine is an excellent remedy, in doses of twenty to thirty drops in a little water.—*Sanitarian.*

I have used TONGALINE extensively and *have been well satisfied with its results.* You are to be congratulated on the value of the article which you offer to physicians.—R. A. Vance M.D., New York.

For Sale.—A practice in eastern Oregon for $1500, doing a yearly business of $4,000, collecting $3.000. Good reasons for selling. Address, M. Littebrandt, M.D., Elgin. Oregon.

For Sale.—A general practice in a good growing town. Address, "H," Lock Box 85, Independence, Kansas.

Liq. Tong. Sal.

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INDICATIONS: Neuralgia, Rheumatism, Nervous Headache, Gout, Sciatica, Dysmenorrhea and where the use of Salicylates is indicated.

FORMULA:—Each fluid drachm represents Tonga, thirty grains; Extractum Cimicifugœ Racemosœ, two grains; Sodium Salicylate, ten grains; Pilocarpin Salicylate, one-hundreth of a grain; Colchicin Salicylate, one five-hundreth of a grain.

TONGA, Anti-Neuralgic, recommended and introduced to the Profession by Drs. Sidney Ringer, and Wm. Murrell, of London, England.—*London Lancet II*, 1830.

EXTRACTUM CIMICIFUGÆ RACEMOSÆ. Sedative, Anti-Spasmodic. "A sedative of the nervous and vascular systems—Probably it is most useful in Rheumatic Chorea, since it has proved to be an efficient remedy for Acute Articular Rheumatism. It is also excellent in Muscular Rheumatism, and especially in Lumbago.—*Nat'l Dis.* Page 414.

SODIUM SALICYLATE, Anti-Fermentative. Anti-Putrid. Sharkey states: "One must, I think, allow that its discovery as a cure for acute Rheumatism is a triumph of empirical therapeutics which has probably few parallels in the history of medicine."

PILOCARPIN SALICYLATE. Diaphoretic, "In Syphilitic Rheumatism its sudorific action frequently removes the nocturnal pains—and is efficient in Muscular Rheumatism and Sciatica."—*Nat'l Disp.* Page 1077

COLCHICIN SALICYLATE. Purgative. Diuretic. "Professor Chelius states that it changes the chemical constitution of the urine in arthritic patients producing an evident increase of the uric acid—Dr. Maclagan has found it greatly to increase the proportion both of urea and uric acid in the urine and where these previously existed in the blood to separate them from it."—*U. S. Disp.* Page 473.

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THE OMAHA CLINIC.

A MONTHLY JOURNAL

DEVOTED TO THE MEDICAL PROFESSION OF THE WEST.

VOL. II. OMAHA, DECEMBER, 1889. No. 9.

Original Articles.

A CASE OF TUMOR IN THE MALE PERINEUM.*

By PROF. W. F. MILROY, M.D., Omaha, Neb.

I ask your attention to the following case, related somewhat in detail, because I am persuaded that it is one by no means frequently met with, and will well repay careful study.

Case, Aug. 21, 1887.—W.B., male, Scotch, age 52, employed for the past nine years in the white lead works in this city. In early life was a seaman for years. The patient presented symptoms of chronic lead poisoning, and a diagnosis was made in accordance therewith, and treatment recommended.

The writer left the city immediately after this and being called to see the patient after his return (Oct. 21, 1887), ascertained the following facts:

The patient after the above interview grew rapidly worse, and suffered complete paralysis, became maniacal and in short was the victim of chronic lead poisoning in its severest form. At the present time examination shows complete paralysis of the upper extremities including the shoulders and other effects of the poison. Treatment was instituted and continued with steady improvement so that on April 10th, 1888, the use of the muscles was restored except the extensors of the wrists and hands and the supinators of these parts. In these much improvement had occurred.

On April 10th, 1888, patient stated that soon after March 1st he noticed pain between his legs back of the scrotum, and felt a slight but hard ridge in that location, which has continued to grow. Has now a pretty severe pain, which he describes as "dull and sickening" upon sitting or walking about, at close of urination, and some after defecation. No appetite. Is obliged to urinate five or six times every night, and as often during the day. All the symptoms have been worse for a few days past. Temperature normal; pulse 110 and feeble.

Physical examination showed the scrotum and integument normal in appearance. A tumor is felt, conical in form, the apex beginning at the anterior margin of the anus, and passing forward a distance of about four inches bringing the base about the middle of the scrotum, as it normally hangs. This base measures about one and three-fourths inches in diameter, the sides smooth and even, but the left somewhat flattened. The base also is rather even. It involves the corpus spongiosum and both of the corporal cavernosæ, the right somewhat more than the left. It gives the sensation of a solid body, very hard and movable to a very limited degree. Integument not adherent. Moderately sensitive to pressure, but quite so at the base. The induration extends farther anteriorly in the right cavernous body than in the left, to the extent of almost one inch, becoming less and less marked. It projects somewhat from the mass on the left side also.

Patient states that the tumor was first noticed by him near the anus, and has extended gradually forward, the most sensitive part all the time being that most recently formed. The body of the penis appears normal in front of the scrotum. It is 4⅛ inches in circumference, but a short distance beyond the meatus there is a stricture which admits only No. 18 F. bulbous bougie, while according to Prof. Otis' rule No. —— should pass. The urethra is somewhat sensitive throughout nearly the whole of its extent. It is most so from a point about four inches from the meatus, through that portion surrounded by the tumor and least sensitive through the prostatic portion. Withdrawal of the bougie is followed by a few drops of bloody urine. The glans penis is indurated and of a pale color. Examination per rectum reveals no abnormal sensitiveness, but an indurated surface with considerable swelling is felt around the prostate in every direction as far as the finger can reach, and taking the course of the deep perineal fascia. There is a row of glands in each groin, somewhat enlarged and not sensitive.

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*Read before the Medical Society of the Missouri Valley, Sept 20, 1889.

Examination of urine — Color normal; acid; no albumen or sugar; moderate amount of light colored sediment. The microscope shows considerable pus, very little mucus and a few epithelial cells.

Patient states that he had gonorrhœa on ship board when young, but not since. A very careful physical examination gives not the slightest suspicion of syphilis.

Ordered a sedative mixture of Inf. of uva ursa and hops, with soda bicarb. and a small dose of morphine; also pota. iodide, gr. x, t. e. d., to be increased a grain with each dose.

There being a doubt as to the diagnosis, two days from the time the above examination was made, saw patient with Dr. J. E. Summers, Jr. On this occasion no new facts were elicited and it was agreed that the diagnosis rested between malignant disease and chronic cellular inflammation.

April 25, fifteen days from the first examination, patient feels much better. The pain is gone and the sensitiveness much less. Obstruction to the passage of urine less and the tumor about the same in size. The above treatment has been continued, and is now taking forty grains of potas. iod. t. e. d., at which amount he is ordered to continue.

May 3.—Patient feels more comfortable. States that during the last two days of April there was an abundant, light-colored tenacious sediment in the urine, though the urine is now clear again. Since that time it has passed more freely and with less pain. Examination shows a marked decrease in the size of the tumor at its base, and also in the degree of tenderness; other symptoms same.

May 22.—Two days ago a urinary fistula made its appearance just behind the scrotum, three-fourths of an inch to right of median line. The superficial tissues of scrotum and perineum appear much inflamed. Urine passes by way of the fistula with each urination and very slowly—scarcely more than a drop at a time, through the meatus.

May 23.—Patient was seen with Drs. Donald Macrae, of Council Bluffs, and J. E. Summers, Jr., in consultation. A diagnosis of scirrhous cancer was agreed upon, and as surgical trentment was thought to be out of the question, palliative measures—to sterilize the urine, relieve pain, etc.—were recommended. The potas. iodide was ordered to be discontinued. At the present time the flow of urine is hardly more than a drop through the meatus, and only about the same through the fistula. Dr. Summers is able to make out a marked increase in the size of the tumor since his last visit, six weeks ago.

One week from the date of this consultation improvement began in all the symptoms and progressed steadily, so that, according to my notes five weeks later, he urinated much more freely, suffered less from vesicle irritation, the pain had entirely gone, and much of the tenderness as well. The tumor also decidedly reduced in size. In short, his condition was in all respects greatly improved. Repair of the results of the lead palsy had remained in *statu quo* for several months, but at this time a marked improvement in the "wrist drop" was apparent.

From this point improvement was continuous though not rapid. October 25th, a small indurated region remained on the right side of the median line near the scrotum. It had disappeared from the left side. The induration in the glans remains to a slight degree.

On November 23d, six months from the date on which a diagnosis of malignant disease was made, there still remained a well marked trace of the induration. The general condition is excellent.

The patient was seen September 16th, 1889. General condition excellent, all the paralysis has disappeared. The fistula remains, though only to allow the passage of a few drops of urine once in a week or ten days. The tumor has entirely disappeared. The prostate is somewhat enlarged, as occurs in old men. There is a little irritation about the meatus, but no examination for stricture was made, though there are symptoms of its presence.

During the progress of the case I was unable in the literature at my command to find any description of disease or injury that at all corresponded with the case in hand, and was consequently somewhat at sea in endeavoring to establish a rational theory of the case. There is no mention by any author with which I am acquainted of cancer taking the course and situation illustrated by the tumor of my patient. As soon as convalesence was established, however, it was evident that I had to do with a cellular inflammation. This being true, the questions arose, what was its cause, and where its origin?

While preparing this report I happened upon a paragraph in an article which I had previously overlooked, by a gentleman whose opinion as visiting surgeon, I learned while a hospital intervene, to hold in high esteem. I refer to Dr. Jos. W. Howe, of New York. The article is in Vol. II. of Ashurst's System of Surgery, entitled "Diseases of the Cellular Tissue," and the paragraph to which I refer relates to peri-urethral cellulitis." Dr. Howe mentions two forms of this latter disease, one in which the inflammation occurs around small isolated patches in the penile portion of the urethra, and a second in which it forms one continuous mass between the layers of the triangular ligaments.

This second form of inflammation, he says, is sometimes the result of blows and falls upon the perineum and may also be caused by a small point of follicular ulceration behind a stricture. The symptoms which he enumerates are pain in the perineum on one side or other of the median line, extending to the arms and the inner side of the thigh, and more severe on pressure and micturition. As the disease progresses, a hard, well-defined swelling is found, generally on the right of the median line. This gradually extends until the perineum is equally distended on either side of the raphei, and a well-marked tumor formed. In some cases the exudation is in sufficient quantity to close the urethral canal and cause retention of urine; or if pressure does not close the canal it may cause ulceration of the urethra and give exit to the pus in that way. The disease generally ends in supuration.

In the opinion of the writer the case was one of peri-urethral cellulitis of Dr. Howe's second class, *i. e.*, beginning around the membranous portion of the urethra. It was caused by the stricture which existed. From this seat of origin it extended along the urethra in the cellular and muscular tissue, which surrounds it, until within it involved the prostrate gland and all the tissues at the base of the bladder, and without it invaded the spongy body first, and from it extended into the cavernous bodies—the invasion of the right keeping somewhat in advance of the left as is the rule in such cases, according to the author just quoted. The invasion of the perineal superficial fascia and integument was prevented by the deep layer of the superficial fascia. The indurated condition of the glands was probably due to the interference with the circulation caused by the changes further back in the penis. The retention of urine and formation of fistula are easily understood—the former being due to the encroachment upon the canal by the tumor, the latter to the ulceration of the inflamed part, permitting the escape of pus both by the urethra and externally.

The treatment of the perineal variety of peri-urethral cellulitis consists in leeches and cathartics to cut short the inflammation, and early incision into the inflammatory swelling, through the dense fascia, to insure the escape of the pus externally and save the urethra from perforation. The incision should be made over the centre of the swelling, whether that be in the median line or not. If the urethra has already been perforated it is well to find the opening and incise the urethra above and below the perforation. By including the ulcerated opening in the incision a much more rapid cure will be effected and the fistula probably will close.

In making a diagnostic error such, for example, as that which I have just described, it is always pleasant to be in good company. In this respect I have the pleasure, in the present instance, of congratulating myself. I also had the pleasure of congratulating my patient. Our mistakes are, as a rule, I suppose, more instructive to us than our successes. I have the impression that if more of the errors which occur in diagnosis and treatment were made known to the profession, much good would result. It is with the hope of preventing a similar error on the part of anyone present that this case is presented.

DIPHTHERIA AND MEMBRANOUS LARYNGITIS.

Treated with Iodide of Sodium.

By Dr. J. D. Jackson, Doniphan, Neb.

The following report of cases embodies my experience in the use of Iodide of Sodium, and is submitted to the profession in the hope that others will have an equally satisfactory experience.

Was called October 6th, '89, to see two boys of Mr. S., Roy 13 years of age, Lester 10 years. I learned from the parents that, 24 hours preceding the time I first saw them, they comp'ained of chilliness succeeded by moderate febrile reaction; also complained of headache, with pain in limbs and back, and on swallowing.

On examination of Lester, the younger boy, found an exudation over each tonsil. Temperature 101, pulse 120, respiration normal.

On examination of the older boy, Roy, found exudation over right tonsil. Temperature 100½, pulse 100, respiration normal.

Treatment:

Potassa Chlor.,	ʒij
Tinct. Ferri Chlo.,	ʒij
Syrup Simpl.,	℥ij
Aqua. Menth. pip	℥ij

M. Sig. Teaspoonful every hour.

Also, in connection, used inhalation of slacked lime, with antiseptic gargles, nutritious liquid diet, etc.

October 7th. Both boys rested well during night. On examination found no improvement. The younger boy, Lester, having some redness of fauces. Temperature 102, pulse 120, respiration normal. Treatment continued.

October 8th. The younger boy, Lester, passed a restless night. On examination found tonsils covered with exudation, with redness of fauces. Temperature 102, pulse 120, respiration 26.

On examination of Roy, found exudation extending to left tonsil, with redness of fauces. Temperature 101½, pulse 120, respiration normal. Treatment continued.

October 9th. On examination of Lester, found exudation extending to fauces. Noticed slight croupy cough, which the parents informed me had troubled him quite a good deal during the night. Deglutition very difficult. Temperature 103, pulse 130, respiration 40.

Examination of Roy, found exudation covering both tonsils and extending to soft palate. Temperature 102, pulse 120, respiration normal. Complained of nasal passages being very sore, from which there was a purulent discharge, the upper lip becoming somewhat excoriated. Treatment continued, with the addition of Salicylic Acid in 5 gr. doses, the first hour, 4 grains of quinine the second hour, followed with the Iron and Potash mixture the next hour.

October 10th. Both the boys passed a very restless night. Lester, the younger, having gutteral respiration with croup, the parents informing me that they thought he would choke to death. On examination found exudation covering tonsils and soft palate, and knowing full well that it was and had already developed into Diphtheritic Croup or Laryngitis. Temperature 103, pulse 140, respiration 40 and labored.

On examination of Roy, found tonsils covered with exudation extending to fauces. The schneiderian membrane very much affected with a continual purulent discharge from nose; upper lip very much excoriated.

Will say that I pushed the above treatment to its fullest extent and the boys grew gradually worse.

It was on the morning of the 10th that I prepared the Iodide of Sodium, giving it in 10 gr. doses every hour, for six hours, after which I gave the same dose every two hours. After the younger boy, Lester, had taken 60 grains we had the satisfaction of seeing him throw off this membrane that had collected in larynx and trachea, after which he breathed more freely.

October 11th. Being anxious I hastened to their home and to my great satisfaction found some improvement in both the boys. I dropped the remedies I had been using and continued with the Iodide of Sodium, in 10 gr. doses every three hours. In thirty-six hours from the time I gave the first dose I could distinguish the membranes being cast off from soft palate. I kept the treatment up, giving same dose for four days, in which time the fauces and tonsils were clean from membrane. I can say that after twenty-four hours of the above treatment, they never had a bad symptom. Lester, the younger, had loss of voice, (or Aphonia) for three weeks during convalescence.

These boys had a younger brother, three years old, who was in the same room with them almost constantly. We gave him 5 gr. doses of the Sodium preparation and he escaped with slight redness of the throat, with no desposit whatever.

Since October 6th I have had fourteen cases of diphtheria, with one death, which occurred in a family of three children where each one had diphtheritic laryngitis. The one that died being a girl of three years of age. Her parents telling me that she had always been delicate; they also told me that the child, several hours before death, would throw from the throat long shreds of membrane, but became so exhausted that she went beyond that point where she had the strength to throw it off, firmly believing that if the child had had a strong constitution she too would have survived the terrible ordeal.

Will state that of the fourteen cases that I have had, the greater number were of the worst form; and after giving the Iodide of Sodium for thirty-six hours, I have seen the destroying enemy letting loose his hold upon the system, the membrane disappearing from the throat and no bad symptoms following in its wake.

I have given the remedy to children six years of age in doses from 8 to 10 grs., every hour for six hours, and then every two or three hours, and have never discovered any bad effects from its use. I fully believe that, where we can get the cases in any reasonable time, the Iodide of Sodium is our great sheet anchor, being readily taken up by the blood, diffused rapidly through the system and passed out with the waste material, leaving the system unmolested in any way.

*NOTES ON SURGICAL CASES.

By J. E. Summers, Jr., M. D.,

Professor of the Principles and Practice of Surgery, Omaha Medical College.

I.

Tuberculosis of the Ankle-Joint—Amputation.—The patient, a young lady, twenty years of age, was first seen by me September 6th, 1888. She gave briefly this history: Following a fall one and one-half years previously, she commenced to suffer pain and difficulty on locomotion, in the ankle-joint. This was treated by extension, cold, heat, poultices, etc., until eight months prior to my seeing her, when she went to Chicago and entered a hospital under the care of a well-known surgeon, who incised the joint and evacuated some pus. Counter openings were made from time to time, and an attempt by drainage and irrigation with dilute muriatic acid made, to dissolve the carious bone. After six months of such treatment, the joint was resected. This was a complete failure. On October 7th, 1888, the patient being in a bad condition constitutionally and locally, I amputated the leg through the middle third. She made a good recovery.

Remarks.—Had proper fixation with a Thomas or Sayre ankle brace been adopted, no operation would have likely been required; or if, after the formation of pus, instead of simple incision and drainage, a thorough search for and removal of its cause had been made, the limb would probably have been saved. Specimens are to be seen.

II.

Tuberculosis of the Knee-Joint--Amputation.—The patient, a man fifty-nine years old, had suffered, off and on, for years with inflammatory symptoms in the knee-joint and upper third of the tibia. Four years ago pus had discharged from a point about the middle of the upper third of tibia. Last fall, after an attack of acute inflammation in the knee, the leg was markedly flexed on the thigh, and remained so until six weeks prior to my seeing him, when it was forcibly straightened, after division of the ham-string tendons, and put in a plaster cast.

When the man came under my care, the

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*Read before the Medical Society of the Missouri Valley, Sep joint was swollen and painful, and the patient's general condition approaching a critical form, two days later I amputated the thigh through the lower third. Primary union followed, and the man left the hospital in three weeks, and has continued to improve in general health.

Remarks.—My diagnosis, prior to amputation, was chronic tuberculosis, but on examination of the joint after operation I could not tell what the lesion was except an osteo-arthritis. Dr. Gifford solved the problem by the inoculation of the anterior chamber of a rabbit's eye with fluid from the joint, a typical tuberculosis of the iris resulting. Resection in this case was out of the question; the age of the patient contra-indicated it. The general condition *demanded* the removal of the limb.

III.

SARCOMA OF LOWER END OF FEMUR COMMENCING IN THE PERIOSTEUM—AMPUTATION.—I wish simply to call your attention to these gross and microscopical specimens of this lesion occurring in a boy nineteen years old, whom I saw with Dr. Coffman, of this city, and whose thigh I assisted Dr. Coffman in amputating, August 11 of this year. The boy is well and going about, but a recurrence, with death, is certain. There is only one case on record (Butlin) of cure in this lesion, whether the operation was made through the thigh or hip-joint. The gross examination of the specimen shows the disease to have begun in the periosteum, and the microscopical sections classify the lesion as a small round-celled sarcoma. As you remember, the typically small round-celled sarcomas are most malignant, approaching nearest in form those of embryonic tissue—the spindle-celled are next in degree of malignancy, while the giant-celled are the least malignant. Clinical experience has shown that when a sarcoma commences in the bone itself, the degree of malignancy is much less than when it commences in the periosteum, and many cures after operation have been recorded. The rule to follow in these cases is amputation through or above the joint on the proximal side of the bone involved. Most, if not all, primary malignant growths of bone are sarcomas. Carcinoma of bone is secondary. Schwartz found out of 200 cases that the lower extremity was attacked 155 times, (Jones).

IV.

While on the subject of bone and joint lesions, I wish you would notice these two pieces of bone. They are the upper and lower ends of the fragments of a case of non-union of a simple fracture of the lower third of the femur. Eight months after the injury the case came under my care and I resected the femur with great difficulty, wired the ends and got union. This is the man, who is now walking on the limb, the operation having been done in February of this year.

V.

From my hip-joint resections I select one done last May. A boy, twelve years of age, was well advanced in what is known as the third stage of hip-joint disease. The upper end of the femur was removed on a line with the lesser trochanter, and because of perforation and disease, all of the acetabulum. Six weeks after the operation the boy was out, and has been going around on his crutches, wearing a long Sayre's splint. Recently the symptoms of tuberculosis of the kidney have set in. This case had passed the period of disease when operation could be of more than temporary benefit, and is an example of the result of too long delay in explorative measures in this disease.

VI.

TUBERCULOUS TUMOR OF THE BLADDER.—July 18, 1889, a young man, aged twenty-three years, gave the following history: When two years of age he received an injury of the left hip, which was followed, judging from the cicatrices and the marked flexion of the atrophied limb onto the trunk, by a neglected hip-joint disease, which nature had cured in the deformed position. Two years ago the patient began to suffer with frequency of urination, and this increased so much that he was obliged to give up going to school. From time to time the urine was bloody and for two or three months has been more or less continuously so.

Two months ago the patient was examined by a surgeon, who divided a stricture two inches from the meatus. For the past two weeks the patient has been troubled with a bad cough and raises a muco-purulent secretion. The urine is passed every hour in a small stream which frequently stops suddenly and then begins again. Family history elicits that a brother of the young man's father died of tuberculosis of the lungs. Physical signs show a little dullness over the lower portions of both lungs behind, with fine bubbling rales. Temperature 100½° F. Under chloroform, after injecting three ounces of warm carbolized water, a sound was introduced into the bladder—the beak of the instrument could be easily moved to the left and towards the base of the bladder in this direction, but encountered resistance on being turned in the opposite direction, the sensation being that of a very much thickened, irregular bladder wall, or of a new growth occupying the base and front of the bladder to the right of the median line. The finger introduced into the rectum, the sound still in the bladder, confirmed the location of this abnormal state of affairs. After the examination considerable blood and detritus was washed out of the bladder.

Microscopical examination of sputum—Tubercle bacillus. Microscopical examination of urine—Tubercle bacillus.

Remarks.—Without the aid of the microscope in this case the diagnosis could not have been made, as the general condition of the patient was excellent, and the examination of the bladder proved only the presence of a new growth. My suspicions were aroused by the deformity of the hip, and the family history. The patient was sent back to his home.

VII.

STONE IN THE FEMALE BLADDER—LITHOLOPAXY—The patient, about thirty-five years of age, had suffered with symptoms of stone in the bladder for about two years. Some months previous to my seeing her, she had been relieved by her physician of a stone which had, unaided, nearly completed its course through the urethra. The bladder was in fair condition; urine had to be passed every one to two hours. The stone was in my opinion too large to be delivered through the urethra with safety to the subsequent integrity of control over the urine. [A stone more than 8 to 10 lines in diameter should not, as a rule, be removed through the female urethra, experience having demonstrated the great risk of incontinence following such practice.] A lithotrite was introduced in this case, the stone crushed and the fragments washed out, the patient returning to her home ten days after the operation; passing her urine not oftener than every five or six hours. The operation was done in July, 1889.

VIII.

STONE IN THE BLADDER—LATERAL LITHOTOMY—A gentleman, sixty-seven years of age, with a history of stone in the bladder dating back more than two years, was first seen by me five weeks ago. Urine was bloody and mixed with muco-pus, and the bladder contracted, its walls thickened. The urine was passed every hour. The searcher disclosed a stone. Three weeks ago to-day I did a lateral lithotomy, removing a calculus about one inch in diameter. There was considerable phosphatic incrustation of the mucous membrane, and two large pediculated masses of the same material, which were removed with the scoop. The wound is closed and the urine passes through the natural channel, being voided every three hours.

Remarks—I believe there are few cases in which a stone in the female bladder cannot be crushed and removed through the urethra, and only in the rarest cases will a cutting operation be called for. I cannot agree with the recent writings of a well known teacher and author who says (*Med. Red.*, Aug. 17, 1889): "For stone in the female it (the high operation) should be invariably selected, when the calculus is too large or too firm to be crushed and removed per urethram." The vaginal operation, by using Simon's incision (a Y) will give ample room for the removal of most any sized stone, and only in the most exceptional cases, chiefly in young children, should the high operation be done in the female sex. The immediate or later closure of the incision is under the control of the surgeon in the vaginal operation. My reasons for doing a perineal operation in the case of the old gentleman are obvious—a median incision would have, perhaps, done as well as the lateral, because of the size of the stone, yet on the whole, I prefer the lateral in most all cases.

IX.

GUN-SHOT WOUND OF THE INTESTINE.—LAPAROTOMY.—DEATH.—I heard Dr. McGraw, of Detroit, read a paper before the A. M. Assn. some two or three years ago, advocating strongly that the incision in laparotomy for gun-shot wounds, where the point of entrance of the bullet was at some distance from the median line, should as a rule, be made through this point and in a direction giving the nearest approach to that part of the intestine probably the seat of injury—this I have reason to believe sound practice. In a case operated upon by myself a few weeks ago, where the point of entrance of a 38-calibre bullet was about two inches to the left of the left rectus muscle, and above the umbilicus, the missile having been fired by an individual on horseback, the victim being afoot, I made my incision, a long one, in the median line, and it was with the utmost difficulty that, after the removal of all of the small intestine, I was able to close four perforations of the sigmoid flexure, the lowest being just above the commencement of the rectum. The meso-colon was so short that it was impossible to bring the wounded gut into the incision, and all of my sutures had to be made with hands and instruments deep within the abdominal cavity. The necessary manipulation of the small intestine and the length of time required to complete the operation, so added to the shock of the injury, that my patient died some six hours later, never rallying. The operation was done ten hours after the receipt of the injury. There was extravasation of fæcal matter with a commencing peritonitis.

Remarks.—Had a lateral incision been done the shock would have been much less, as the points of injury could have been more readily and rapidly repaired, and the patient given some chance for a recovery. When I state, that out of fifteen laparotomies done by me within a little over two years, for varied lesions, not one, and there have been some difficult ones, has given me more physical and mental strain, you will appreciate how I feel in regard to this suggestion of Dr. McGraw's.

These cases are chosen from among a goodly number occurring in my practice during the past year, and illustrate, I believe, practical points in surgery.

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*ACONITINE AND VERATRINE.

By L. A. MERRIAM, M.D., Omaha, Neb.

From *aconitum napellus*, or monk's hood, a tall perennial plant indigenous in Europe, is obtained a pure crystaline alkaloid, known as aconitine in France and aconitia in this country. It has the chemical composition of $C_{30} H_{47} NO_7$. The average adult dose is $\frac{1}{150}$ of a grain, given every hour, or $\frac{1}{500}$ of a grain every fifteen minutes until the desired effect is obtained. The tolerance of this alkaloid by the human body is in some cases very great, depending upon the impressionability of the patient as well as the violence of the attack of the disease, as many as twenty granules being required in some cases of very high temperature before the fever abates, especially is this true in the initial stage of fevers and inflammations.

Veratrine as it is called by the French, or Veratria, by the Pharmacopœia of the United States, is an alkaloid having the chemical composition of $C_{32} H_{52} N_8 O_2$, and is derived from the seeds of veratrum sabadilla. When using the fluid extract of veratrum viride you are not getting the effects of veratrine, for this alkaloid is not found in the plant veratrum viride or in veratrum album. The dose that may be given safely to adults varies from $\frac{1}{50}$ to $\frac{1}{10}$ of a grain, though for practical purposes when given in conjunction with aconitine, a dose of $\frac{1}{150}$ of a grain is sufficient when given every hour or half-hour. These two alkaloids, being similar in their action and not identical, have also a special action of their own, being chemically different. By their similarity of action they become synergistic when given together, hence the beneficial results obtained by their joint use.

Have you used these alkaloids in conjunction, as I have described, and been disappointed in the anticipated results? You may look for the explanation in the fact that you have not given the necessary number of doses during the specified time; you may not have proportioned the size of the dose and the number of the doses to the severity of the case in question. Remember, the fever offers a resistance to the action of these alkaloids; hence larger doses not only may, but should be given to a patient in the initial fever, with high temperature, than to a patient having a low temperature, or later in the course of the disease. Doses that might be unsafe to a person in health become absolutely safe and necessary in the early stages of these severe pyrexias, if we would jugulate the disease. Small doses frequently repeated is the rule, because by this method the results can be watched and overdosage avoided, and because it is in accordance with the laws of action and re-action in physiological chemistry.

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*Read before the Medical Society of the Missouri Valley, Sept. 20, 1889.

These alkaloids not only have a chemical, but also a dynamic or vital action. Under their combined action the skin becomes cool, a feeling of calm and well-being takes the place of delirium and agitation, and the conflagration that was consuming the patient is extinguished. Let no one condemn this method before they have studied it practically at the bedside in many cases. To get the full benefit of these alkaloids it is often necessary to add as an adjuvant digitaline and the arseniate of strychnia, which are vital stimulants and increase the vital resistance of the organism. It is said by some that aconitine and veratrine are great depressants and therefore should not be used, as the fever in itself is greatly depressing, and the treatment should be stimulating. You forget that stimulation and sedation are the same in kind, only differing in degree; that the action of medicines is both material and dynamic, and, when exclusively dynamic, as some are, that they are, in small doses, always a stimulant before they produce sedation. A thorough acquaintance with these alkaloids, both scientifically and practically, will, if your conclusions are conscientious, make you a convert to their very valuable services in the initial stages of all forms of pyrexia.

*THE MANAGEMENT OF STRABISMUS.

By C. M. Hobby, M. D., Iowa City, Iowa.

The treatment, or the management, of a case of strabismus presents many factors for consideration, and the results achieved depend so largely upon the weight given these factors, that it is impossible in a brief paper to do more than consider the lines of study, which, when applied to the case, yield the greatest amount of satisfaction to the patient and the most comfortable assurance to the surgeon.

So placing on one side much of the old routine consideration of strabismus found in the text-books, we make for clinical purposes an artificial division of cases into those younger than puberty, and those between puberty and 25 or 30 years of age, and those still older. The second division depending upon the changes that take place in the accommodative function at from 25 to 30 years of age. These periods may be called the Infantile, the Adolescent and the Adult. In the infantile period the process of growth being active, organs are adapted the most readily to the demands placed upon them, muscles acquire special or changed functions, and every organ tries to adapt itself to the environment. In adolescence such changes less readily take place, the organs which are not in harmony with the surroundings cease to struggle with conditions, and failing to adapt themselves to the environment, drop out of the contest, become functionless, or retaining function imperfectly, require extraordinary demands upon them before they respond. They are still unwillingly and with difficulty open to training processes, but are not prone to undergo spontaneous changes of adaptation. In the adult period adaptability ceases, neither spontaneously nor by cultivation can new methods of use be acquired; habits, mannerisms and functional activity have crystalized.

We must next consider whether the particular case is one having its origin in functional processes, that is, whether it is the result of the individual trying to get the best use out of imperfect tools—concomitant or functional strabismus; or whether it is the

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*Read before the Medical Society of the Missouri Valley, Sept. 20, 1889.

result of centric or eccentric enfeeblement of one or more muscles—paretic or paralytic strabismus. To this last belongs for a few more years a class of cases, functional in their origin, but converted into paretic or paralytic cases by unintelligent surgery.

Lastly cases may be classified into the convergent, divergent, sursumvergent, and deorsumvergent. In-co-ordination of the convergent form is the most common, and with this is frequently associated an upward cast of the non-fixing eye. Divergent squint is not relatively so common in our prairie region as in the denser populations of the east and especially of Europe.

If in the management of these cases we place our aim high from the beginning we need to give careful attention to the details of each case. The aim should be first, to secure *binocular vision;* this carries with it the second object at which we aim when assured that the first is impracticable, viz: *relief of deformity.* Unfortunately it is impossible to secure in any very large proportion of cases the patient application of principles to a treatment necessarily from six to ten years in duration, but I have secured such attention in a sufficient number of cases to predict a cure of convergent squint without operation in 80 per cent. of those brought under management at 5 years of age or under.

Let us take a case of 2½ years of age, the child of healthy parents, father hyperopic, no squint so far as known in other members of the family. At 18 months it was noticed after excitement or crying when the attention was attracted to some plaything, that the eyes seemed crossed, that sometimes one and sometimes the other turned in, but for the preceding six months the squint has been constant, and for example, the right eye "turned in." At this age the measurement of acuteness of vision is impossible, we can with adroitness examine the refraction by the ophthalmoscope or retinoscopy. We find the left eye hyperopic about 1.50 d. and the right eye with hyperopic astigmatism approximately 1.50 d. in the vertical and 3.00 d. in the horizontal. We appreciate, from the examination, that the image upon the right retina is not so distinct as the other, and is already being disregarded; that binocular vision is suppressed, and that instead of seeing double the little patient ideates only the single image. Now if operation would establish equilibrium of use of the eyes, it would be indicated, for observation and experience both go to show that an organ withheld from use, whether it be purely muscular like the arm, or both muscular and of specialized function as the eye, is sure to loose its functional power from non-use. The eye blanketed from birth by congenital cataract never regains vision of much value unless operated on in infancy, while the eye blind from cataract, after once developing full functional activity, may retain a considerable power after many years of non-use. There is not space here to consider the arguments, pro and con, in reference to amblyopia from non-use. I can only express my belief that appreciation of the fact is the key to the greatest success in the management of strabismus in early life. However, in itself, operation does not restore equilibrium of function, and in the typical case the prognosis as to cure without operation would be very favorable if the case could be kept under observation and the treatment thoroughly carried out.

The indications to be met in the attempt to cure without operation are first to prevent loss of function of the most imperfect eye, and second to break up, temporarily at least, the co-ordination between the internal and external ocular accommodations. The first indication can be most satisfactorily met at this age by a bandage on the best eye, a handkerchief or any obstruction of vision, kept on an hour every day, compelling the use of the feeble eye. This should be continued until the child is old enough to wear glasses. The second indication can be met by the use of mydriatics; practically it is sufficient if this be kept up for half the time, two weeks out of every month. Nor is it necessary to paralyze the accommodation, enfeeblement of action of the ciliary muscles sufficient to bring them into harmony with the converging muscles, answers the indication. A solution of $\frac{1}{10}$ per cent. of atropia used daily will do this. In the prolonged use of atropia, even of this weak solution, the dangers of follicular conjunctivitis must be guarded against. This course will often cure a strabismus in a child of these tender years, before even an opportunity has been afforded to correct the refraction with glasses. The importance of securing and defending binocular vision will however suggest that glasses should be adapted as soon as they can be worn.

The fact that no amount of hyperopia, no special difference in the perfection of retinal images, necessitates the continuance of strabismus, leads to the suggestion that were our art as perfect as our theory, early management would banish strabismus.

Let us now follow our case further, supposing after all our care, at 6 years of age, we find the strabismus still existing. Now we can usually by the ophthalmoscope or retinoscopy, adjust glasses within reasonable limits of accuracy. We can make tests with prisms as to the latent binocular vision; these tests will usually be unsatisfactory, and we may doubt the possibility of its existence, but it may still be possible, and we can still confidently hope to cure the deformity.

The same measures for keeping the feeble eye in use should be continued, and unless the eye be impaired otherwise than by refractive error the use of the eye by itself will be more comfortable to the little patient, and we can begin to expect intelligent co-operation. Now the eye should be trained in distinguishing objects at different distances, color and form experimented upon, the patient has begun to learn letters, and should be made as far as possible to repeat lessons, using the weak eye. At intervals complete paralysis of the accommodation should be secured, always upon both sides. Often the strabismus will disappear under atropia. If it does, the first use of glasses should be followed by three months of complete paralysis of accommodation. Muscular gymnastics may now be used with advantage, especially forced external movements, to increase the power of the external and oblique muscles, one eye being covered and the head at rest, attention is directed at an object, as a pencil, and this is carried outward as far as the eye can be turned, brought quickly back, and the action repeated many times as rapidly as possible. The same movements outwards and upwards, and outwards and downwards, are repeated, then the other eye is drilled in the same manner. I have found these movements of greater value than any of the mechanical devices, both in training muscles in children, and after operation.

The use of the stereoscope especially requires an amount of intelligent co-operation unusual amongst children of this early age. But supposing our case at the beginning, by ophtalmoscopy, showed, instead of the ordinary slight preponderance of one eye over the other in opportunities for visual acuteness, such a decided impairment of one eye as would in the adult make binocular vision impossible, even with corrected refraction, are we therefore to give up all hopes of relieving the deformity?

I think we may sometimes do even more than this. An eye kept from the formation of visual images by congenital cataract loses the special sensibility of the maculea lutea, and whatever vision may be disclosed it is devoid of a point of fixation, and its images are but feebly appreciated. A similar condition obtains in the amblyopia that we find with strabismus. The special sensibility of the visual center of the retina is lost, and sometimes an imperfect and misplaced visual center is developed, not anatomically but functionally. Now, recognizing the refractive error early, partially neutralizing, as by a hand glass, and compelling a moderate amount of use of the eye daily, we may succeed in retaining an amount of vision which would be useful in case of accident or disease of the best eye, and such training would be no disadvantage to the efforts to relieve deformity, which should be carried out in the manner just described.

Divergent squint is so rare during this period that I cannot speak of its management practically, I see no objection to the early and complete correction of the refractive errors in such cases, and should not expect to obtain much benefit from muscular training.

Paralytic squint is not so rare during the infantile period. It leads to the production of mannerisms, the result of efforts to avoid diplopia. As it is not associated with refractive errors except incidentally, and as it does not as a rule lead to amblyopia, at least for a long time, its presence furnishes a problem differing widely from functional squint. So far as possible, the general indications for treatment of paralyzed muscles apply to the treatment of paralytic squint. When these measures have failed, operation can sometimes relieve diplopia and deformity, although restoration of full functional activity is generally impossible.

Many cases starting in infancy with strabismus reach the period of puberty with eyes straight, not having had any treatment. Others who have been successfully operated upon, at nine, ten, eleven or twelve years of age, soon after this period begin to show divergence. All who have not been trained, and who do not wear glasses, that have once had strabismus come to the age of puberty with anisometropia, and usually with amblyopia of the eye that once turned.

We are especially interested in those, who, having received no treatment have also escaped the benevolent operations of nature. These cases present every possible variety of refractive error. Very few have equally distinct vision with each eye. At least 95 per cent. are hyperopic; slight degrees of hyperopia predominating, a considerable proportion have useful vision with the squinting eye. While some of these cases might doubtless be relieved of their deformity by prolonged training, yet few of the whole number retain capacity for binocular vision, and the problem is to relieve the deformity, and this can be secured easier, and very nearly as safely, by operation.

There are two methods of operation to be selected from. One the weakening of a muscle by carrying its attachment backwards towards the equator of the globe, the other strengthening of a muscle by changing its attachment forwards towards the anterior pole of the globe. Incidentally, but necessarily, the first allows the globe to come slightly forward and become more prominent, while the other, drawing the globe backwards, makes it appear smaller.

This matter of prominence of the eye becomes of importance in the study of each particular case. It does not seem to me that the methods of operation are of much importance if certain salient points are kept in mind. Whether forceps or hook is used, whether the incision be vertical or horizontal, whether the conjunctiva be cut through freely, or the whole operation be done through a small button hole, and the operation be labelled subconjunctival, has but little to do with the result. To avoid the shrinking of the caruncle, which results from the retiring tendon drawing backward the ocular tunic and superimposed tissue is important, both for appearance, and for the preservation of the normal flow of tears to the *puncta lachrymalia*, and this is secured by carefully separating the tissues over the tunic; and to avoid the unpleasant but fortunately not dangerous presence of a subconjunctival thrombus, which is secured by letting the blood *out*, instead of *in*. These points being kept in mind, the other steps of the operation are of importance only as they serve to meet the indications of the case.

In cases of functional convergent squint, it is desirable, as a rule, to operate upon both eyes, if the operation of tenotomy be selected, regardless of the amount of convergence. As this statement is not in harmony with the text books, it deserves explanation. In the preliminary examination of the patient, the mobility of the eyes is studied, for each eye separately, and for both together, it will usually be found that the external excursion of each eye is reduced, and very nearly to the same extent. If in our efforts to relieve the deformity we weaken the internal muscle by a backward insertion of three millimeters we limit its internal movement by that amount, and increase the external movement equivalently. If this be done only on one side, we destroy the equilibrium of movement, and find that the parallelism of axis thus obtained is limited to central regions of the field, and fails when the eyes are directed many degrees to either side of the direct axis of the head. To a less extent this is true of the operations of advancement and resection of the tendon, and since the tenotomy may be limited to almost as small a change as a single millimeter, section of corresponding tendons of both eyes, gives the greatest opportunity for equable movement.

While unquestionably a greater approach toward perfection is possible when an interval of several weeks separates the operations, yet the majority of the cases we have to deal with in our private practice in the West, come from such distances that the delay of several weeks between operations works great hardship to the patient, and it is so seldom that corrective measures become necessary after a well performed double operation, that as a rule I operate upon both eyes at once.

The choice between simple tenotomy and tenotomy with advancement, becomes of importance sometimes. I once believed that advancement was likely to supplant tenotomy in all cases, and I still believe that it can be substituted with advantage in a large proportion of cases, still it must be recognized as more difficult, and considerably more dangerous than simple tenotomy. It presents a great advantage in patients with prominent eyes, in those with a high degree of strabismus and in those cases where previous tenotomy has been followed by too great effect, as has been the usual sequel of the old operation of cutting through the belly of the muscle; it is also the best operation in those cases of paralytic squint that admit of operation.

Returning to the clinical consideration of cases of the adolescent class, we can best consider them in three divisions:

1st. A small proportion having fairly good vision with each eye, whether the squint is alternating or not. Such cases as a rule have very moderate amounts of refractive error.

2nd. Those cases which always fix objects with the same eye, but have a moderate amount of vision with the apparently squinting eye, as for example those which we corrected give $\frac{20}{30}$ or better with the best eye, and more than $\frac{20}{200}$ and less than $\frac{20}{30}$ with the squinting eye, if the visual acuteness can be brought to $\frac{20}{30}$ by correction.

3d. Those which fixing with the best eye have no useful vision, with or without correction, with the squinting eye.

We recognize that in the first class binocular vision is possible, and with careful training after operation is probable, and that complete cure of the strabismus is to be expected.

In the second class this is a mere possibility, which is the greater the less the time past puberty when we make efforts at restoration.

The third class gives no opportunity for binocular vision, and we aim only to relieve the deformity; in many of this class we have the satisfaction of securing improvement of vision of both eyes. So far as the measure of the operation by the amount of squint, such absolute rules as we find in the text books have proven a source of disappointment.

It is said that a clean section of the tendon alone will give five millimeters of correction; that this can be increased by extending the incision above and below into the ocular tunic to nearly ten millimeters; after many hundred sections of the tendon of the *internal rectus*, I am bound to say that the effect of any particular amount of section of the tendon and ocular tunic cannot be pre-determined. An estimate of effect can be formed by the rapidity and strength of action of the opposing muscle, but I have often found a maximum section produce not to exceed four millimeters of effect, and *per contra* have encountered eight millimeters of effect from a clean tenotomy alone. Fortunately we have various methods of increasing the effect of a tenotomy, the most important of which are, separation of the conjunctiva from the tunic, extension of the cut, above and below the muscle into the capsule or fascia, forcibly rotating the globe outwards by aid of the fixation forceps, stitching a fold in the conjunctiva and sub-conjunctival tissues externally, and the use of "stay" sutures from the conjunctiva to the integument of the temple.

We can limit the effect of operations by sutures to almost any extent, but I do not believe any effect is to be gained by partial tenotomy.

Rather than sacrifice any of the present or prospective freedom of motion of the globe, it is better to supplement the tenotomy with advancement, and when this can be foreseen the advancement upon one side should precede the tenotomy on the other, since for obvious reasons the tenotomy can be gauged in the way of limitation much easier than the advancement.

With the first class of adolescents the aim is to produce as near an approximation as possible to parallelism of the axis of vision when directed toward a distant point, without limiting the converging power too much; and as under cocaine anesthesia, tests can be repeated from time to time during the operation, we should try to secure parallelism at a distance with ability to converge towards a point six inches distant from the eye.

To secure re-establishment of binocular vision at once, however desirable, must be beyond our expectation. If our patient discovers diplopia within a few days, we can congratulate ourselves as being about to secure a perfect cure. In these cases it is best to stimulate the bilateral function by testing with prisms and colored glasses, for the awakening of the sensibility to double images brings to our aid the conscious use of muscles to correct position. In these as in other cases, it is desirable to train the muscles to independent action. Being voluntary muscles they are subject to the same principles of gymnastic training as apply to the other voluntary muscles, and it is desirable as well to cultivate the strength of the weakened muscles, as to fortify their antagonists. This can be done by adding attempts at convergance often repeated, to the muscular training heretofore described. Efforts at overcoming gradually increasing strengths of prisms may supplement the other muscular training, but unless the use of the prisms is directly under the watchful care of the surgeon, disappointment in their effect is likely to ensue. While the pure muscular gymnastics indicated can be employed without the surgeon, and at frequent intervals. The greatest possible care in the adaptation of the correcting glasses is important in these cases. The hyperopia and hyperopic astigmatism should be completely corrected, and the glasses worn constantly, even if not at first acceptable to the patient.

The management of the second class of adolescents requires some modifications of the preceding plan. We here hope ultimately to secure binocular vision, but we recognize that in a considerable proportion of cases we are to be disappointed; indeed, success is the exception.

We, therefore, aim to put the patient in the best position for binocular vision, and at the same time to secure ultimate relief of the deformity. Some of these cases seem to do better eventually when the operation falls short of complete correction, and I believe it to be best, if the patient be not far past puberty, to trust a considerable amount of the correction to muscular training. These are the cases that occasionally present us after a few years with a divergent strabismus for which we receive the credit.

If correction of the refraction brings the squinting eye into the limits of useful vision, we can hope to materially improve the muscular function, and can well afford to leave a convergence of from four to six millimeters. It is well, however, in these cases to suggest the probability of an additional operation, to follow the first after a year or so.

Here again the measurement of the refraction is more important than the dosage of the operation. Here, too, the partially amblyopic eye calls all the resources of ophthalmoscopy and retinoscopy to the more accurate determination of its refractive errors; in these cases we also find great changes in the muscular action determined by prolonged paralysis of the accommodation. Some improve rapidly in the acuteness of vision, of the hitherto disused eye, when compelled to use it for fixed periods every day. A bandage over the fixing eye for an hour morning and evening, with corrected refraction and the use of atropia, will often add four millimeters to the effect of an operation, in the course of three months, and at the same time bring a spoiling eye into useful service. Still, we must recognize that our art is unable to bring about binocular vision in the majority of these cases, and our efforts failing, we can later, by advancement or additional section, secure complete relief of the deformity.

The third category of adolescents can only hope for relief of deformity, as in these cases, relief of the refractive error, and consequent strain, leads to material diminution in the convergence. Where it is possible, the correction and use of glasses should precede by six months the operation, and then by tenotomy or advancement, one or both, complete correction should be secured. Where this delay is impossible, thorough paralysis of the accommodation, before operating, will serve to indicate the amount of strabismus that will bear correction. Neglect of this precaution will occasionally be followed by divergence, especially during fatigue. While with these precautions, the immediate effect of the operation will seem insufficient, the outcome will be much more satisfactory. As in the other conditions, correction of the refraction, especially in these cases, of the best eye, is of the greatest importance, and the muscular gymnastics should be thoroughly carried out.

The same principles apply to the treatment of strabismus of adults. We can not, however, hope to secure the aid of rectified refraction and adjusted accommodation, to increase the effect of our operation; as the individual grows older the influence of tenotomy upon the position and movements of the globe becomes lessened, and we are likely to find after operation that the eye drops back into the same old habit. In patients of thirty-five and upwards, seeking relief from convergent squint, I believe advancement of the tendon offers the most satisfactory solution; training avails but little; glasses improve the visual acuteness, but no longer show any effect upon the convergence. Fortunately, we are seldom called upon by patients of this class to relieve primary squint, but at this time of life many patients, who have been operated on early in life, for the relief of convergence, and for years have thought the operation successful, now show divergence, with almost or quite complete failure of the *interni*. In several of these cases I have operated to relieve deformity, uniformly finding atrophy of the *interni*. In such cases, restoration of the motility being impossible, the atrophic muscle presenting nothing of value to advance, *straight-ahead* parallelism was secured by resecting the ocular tunic and freely tenotomizing the *externi*. Thus changing a divergent fixedness of the globes into a central and parallel fixation, greatly to the improvement of the patient's appearance.

Divergent strabismus presents itself under several forms, the most common and most important of which, while not apparent to superficial examination, may be termed *insufficiency of the interni.*

A patient, slightly or moderately myopic, complains at times, or constantly, of disturbance of vision, or double vision. Examination shows inability to co-ordinately accommodate and converge. Glasses relieve the vision, but do not overcome the trouble. These quite common cases are unwilling to be considered cross-eyed, and only to the expert would failure of parallelism be visible. Partial relief can be obtained by the use of prisms, but is better afforded by *de Wecker's* operation of advancement of the capsule. We pass from these cases by degrees into those of well marked divergence, presenting the same varieties of visional acuteness, fixation with one eye, and amblyopia from disease or other causes, with the more common cases of convergent strabismus.

The principles applied to convergent squint are also applicable to the treatment of divergent squint, but we have a few modifying points to keep in mind. It rarely begins during the early years of life. The relation of the elongated globe of myopia may present anatomical obstruction to correction, the sclerotic may be thinned at the point of attachment of muscles, adding slightly to the risk of operation. Section of the *externi* does not usually change the direction of the visual axis as much as section of the *interni*. For reasons mentioned above, and to prevent undue prominence of the globe, advancement with tenotomy is to be preferred usually to simple tenotomy.

No general rules can be applied to the treatment of paralytic strabismus. Each case must be studied by itself. Unlike its effect in concomitant squint, tenotomy does not effect restoration of muscular equilibrium when it secures parallelism of axis. The patient, however, seeks rather relief from the diplopia, and the resulting faulty positions of the head and neck, rather than removal of the deformity. I would suggest that in some of the cases of paralytic squint, greater harmony of movements and more comfortable vision would result, if instead of trying to correct the faulty eye, we should try to bring the normal eye into harmony with its fellow.

THE OMAHA CLINIC.

The Editor would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

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OMAHA, DECEMBER, 1889.

MEDICAL SOCIETIES—THEIR USE.

Late meetings of the medical societies of the Missouri Valley have impressed us forcibly with the apparent necessity of a change, which the discussions of papers read, should experience. We refer to the discussions indulged in by the few. These verbose utterances carry upon their surface the impression that they are not the finished product of personal experience, so highly valuable to all of us; but rather repetitions of book-learning, and some of it of a very recent acquisition. When such publications as the "Reference Hand Book of the Medical Sciences" are in the reach of almost every progressive physician, it seems a great hardship to these very members, (very few others do attend the medical society meetings,) to be compelled to sit upon uncomfortable chairs in hot halls for hours simply to hear the familiar voices from text-books and dictionaries, to peruse which the pleasant office and easy chair would, in our opinion, offer greater inducements. The secretaries of our societies take great pains to publish the titles of papers to be read at the meetings, ostensibly for the guidance of attending members; but is it not probable that these sign boards offer to the ambitious linguist opportunities to post up and shine, thereby taking up the time and patience of the majority attending such meetings? Would it not be a decided gain if the temptation were entirely removed by not publishing the titles of the papers to be presented? Is it not possible that after the reading of the many valuable contributions which our progressive western societies can boast of, a spontaneous discussion may spring up, which bristles with the experience of the many, at once practical and progressive?

We deplore the absence of reports of the discussions had at the meetings of the State Society, as well as the Medical Society of the Missouri Valley. These societies, by their judicious course of printing their proceedings in THE OMAHA CLINIC have materially curtailed their expenses for printing, and could well afford to expend a goodly sum upon the report of their discussions, the printing of which would go far to make their work complete, and in case they succeed in eliminating the reproduction of things *that are*, giving time and ear to the many golden kernels stored away by the country members, the shells from which can easily be removed by the skillful hand of the presiding officer. THE OMAHA CLINIC invites the life-long experiences of these physicians, who, after all, represent all there is of medicine—the untiring humanitarian, who knows medicine to heal and assuage pain.

ALCOHOLICS—NARCOTICS.

Dr. Schrieber, the editor of the *Medicinisthe Monatschrift*, in an editorial in a late number, draws attention to the fact of a rapid increase of the use of opium and morphine all over the country—and urges the necessity of legislative interference with the traffic. He especially suggests that a statutory provision be adopted, which by fine and imprisonment, forbids druggists to repeat prescriptions containing these drugs.

It can not be doubted that this suggestion is a good one, if it can be enforced. Yet this practice of repetition can not be the main cause of the increase of the consumption of opiates, for druggists have indulged in this practice since time immemorial. Is it not possible that the use of these terrible narcotics, including cocaine in the category, is one of substitution? Is the thought far-fetched, think you, that because indulgence in alcoholics is more and more frowned out of good society—these things, because used undiscovered for a long time, take the place of the plebian alcohol? Can the medical profession of the great state of Nebraska stand by idly, when its people are earnestly intent upon solving the question of prohibition and high license? Is it not the place of the medical profession to offer such guidance as may assist the intelligent solution of this complex problem?

One point of the issue we are all agreed upon—that the indulgent use of alcoholics is inexcusable. What about the substitution of opiates for alcohol by our fellow-men? If such a calamity is the legitimate offspring of prohibition, will it not be the paramount duty of the profession and its mouth-piece, THE MEDICAL PRESS, to weigh the price paid for the new idol (prohibition) and discover, if possible, if it is not too costly an investment? Let us hear from both sides. Some will poo-hoo the importance of this new (the medical) phase of the subject. Others will, upon earnest consideration, think it the *Juggernaut* imported to destroy our people, not simply physically but spiritually, here and hereafter.

DR. J. E. SUMMERS, JR., has been appointed the attending surgeon at Army Headquarters Department of the Platte, Omaha. This appointment does not in any way interfere with Dr. Summers' private practice.

Correspondence.

EDITOR OMAHA CLINIC: Please allow me space in your valuable journal to report a case which, though perhaps common enough to others, is the only case of the kind with which I have ever met.

I was called some time in September, 1888, to see a Miss ——, age 23, and learned the following history: About four months before she had received a fall, striking upon the buttock. She experinced at the time of the fall, a feeling as of something giving away in the pelvic region. From this time, as she expressed it, there had been a dragging sensation in the pelvis; and at each menstrual period she had pains and a feeling as if she were going to menstruate; but no blood had ever passed. I found her, at the time of my visit, suffering from strong expulsive pains, and with each recurrence of the pain, violent wretching. Upon making digital examination I found the uterus completely retroflexed and the fundus much enlarged. Placing her in the knee-chest position, I succeeded in replacing the enlarged organ, after which I dilated the cervical canal with a Nott's uterine dilator. In a short time a thick, black substance, stringy in appearance, began passing through the cervical canal, but having no offensive odor. From this time on I left the cure entirely to nature, only ordering that the vagina be thoroughly cleansed twice a day with warm carbolized water. She was soon out of bed and has had no menstrual trouble of any kind since.

Is it common for retroflexion to produce complete suppression of the menses; and if so, can we expect so favorable a termination as in the case mentioned?

G. O. REMY, M. D.

AINSWORTH, Neb., Dec. 20, 1889.

Surgical Progress.

WHAT DRESSING SHALL LIE NEXT TO THE WOUND.—The worst type of dressing is represented by vaseline or oils spread upon lint or any textile fabric, because the oleaginous material mingles with exuded lymph and serum and prevents organization, and because new epithelial and connective tissue cells become entangled in the fabric. This type of dressing is also bad because there is nothing in its make up to prevent decomposition of the exudates that nature intends to use for purposes of repair.

There are only two types of the perfect dressing. One of these is represented by an iodoform covering for small wounds. The iodoform forms with lymph a thin firm coagulum that is not readily penetrated by micro-organisms, and even when a few are at work beneath it the ptomaines which they produce are neutralized by the iodoform.

The best dressing is as follows: First, a strip of sterilized Lister's oiled silk which is just large enough to cover the wound or the line of sutures. There is nothing that will take the place of Lister's protective. Gutta percha tissue will not answer, because it is absolutely waterproof, and the skin beneath it becomes somewhat sodden. Spun glass is as objectionable as gauze, or cotton, or textile fabrics, because it entangles new epithelial and connective tissue cells. It is almost impossible to obtain repair by the beautiful process of clot replacement if we cover the clot with anything but Lister's protective; and in skin grafting we can use it to such advantage that it seems as though failures with other dressings must be more frequent than they are. Under the smooth and slightly porous Lister protective, epithelial cells shoot along over the surface of the wound unimpeded, and granulations in open wounds carry on the process of repair without the formation of pus under permanent antiseptic dressings.

Over the Lister's protective we need a thick layer of absorbent gauze or cotton to draw away serum from the wound, and to dry it so that it is not fit food for micro-organisms. —*New Orleans Med. and Surg. Journal.*

A NEW METHOD OF TREATMENT OF TUBERCULOUS PROCESSES.—By A. Landerer, Munich, (*Munchener Med. Wochenschrift*, 1888, Nos. 40 and 41; 1889, No. 4.) The author, basing his experiments upon the good results obtained by the use of Peruvian balsam after excision of the hip-joint, made trial of this agent in seventy cases of surgical tuberculosis. The remedy was applied either pure, incorporated in plaster, or, as for instance, in tubercular disease in the neighborhood of bones and joints, as well as for soaking tampons, in etherial solution. A mixture of Peruvian balsam with almond oil and mucilage of acacia was also found to be a ready means of reaching tuberculous focci, where the above means were found inapplicable (tuberculous cystitis, etc).

The application of Puruvian balsam was not made upon any supposed anti-bacterial or germicidal action, but only for the purpose of stimulating the formation of healthy cicatricial tissue and improving the vital resistance of the tissues to the invasion of tuberculous process.

Intravenous injections, as well as its use subcutaneously, was resorted to by Landerer, basing its use by these means upon the fact that corpuscular elements, such as cinnabar, etc., are deposited in diseasd animals, by preference in localities where inflammatory affections existed, or injuries had been sustained.

The results obtained by Landerer do not appear to be the most brilliant imaginable, inasmuch as what seems to be about the usual proportion of local recurrences and resulting fistulæ occurred. Should his claim to the superiority of this material be sustained, however, it will have the happy effect of dispensing with some of the more grave operative procedures for tuberculous diseases, and substitute therefor less formidable means, such as curetting, partial resection and erasion.

In this connection attention may be called to the iodoform treatment of tuberculous abscesses, particularly those deep and gravitating abscesses following spondylitis. The well known unfavorable, almost hopeless, outlook in this class of cases, in spite of Treve's suggestion to attack the spinal column itself, with a view of removing the diseased bony structure, will lead the surgeon to hail with delight any means which may hold out the slightest hope of relief. Despite the results of experimenters and theorists, P. Bruns, of Tubingen, still pins his faith to iodoform in this class of cases, at least. This surgeon (Burns, *Beitrage zur Klinischen Chirurgie*, bd. iv. heft 1) punctures the psoas, lumbar and other abscesses secondary to Pott's disease, and follows this by frequent injections of an emulsion of iodoform in oil. The most brilliant successes are said to have followed this method of treatment. For instance, in a group of 12 cases of large spondylitic abscesses, 10 were cured. In another series of 35 cases, 24 were completely healed. Surely no other method of treatment heretofore devised has given such excellent results.—*Annals of Surgery.*

ELECTRICITY IN GYNÆCOLOGY ACCORDING TO APOSTOLI'S METHOD.—The author has treated during the last academic year thirty patients. The diagnosis (confirmed in consultation, among others by Prof. Sneguireff) were twelve cases of salpingitis, four of oophoritis, six of metritis, three of amenorrhœa, five of fibromata, and one of atrophic parametritis.

The following conclusions were drawn:

1. In salpingitis (hydro- or hemato-) the continuous current (180-250 milliamperes) gave most brilliant results. In pyosalpingitis the results amounted to nothing (two cases), thus affording perhaps a means of differential diagnosis. There was the same elevation of temperature, up to 38° and 38.5° Cent., in both cases, and the electricity had to be abandoned after five sittings.

2. In three cases of chronic inflammation of the ovaries, the size of the ovary returned to normal and the pains disappeared (160-220 milliamp.)

3. In chronic metritis the author preferred electricity to massage, for he has seen the uterus invariably diminish in size almost to half, after seven seances, and the pains disappear (save in one case, in which the patient could not bear more than 80 milliamp.) with currents reaching the height of 280 milliamp.

4. In amenorrhœa the author had had one success; in two other cases, one patient could not bear more than 50 milliamp., and the other received the application of electricity only four times in four months.

5. In fibromata he believes that it is an unpardonable error to operate without first testing electricity.

6. In a case of atrophic paramentritis (cirrhotic) the cure was not complete, although the painful symptoms had disappeared and the exudation had diminished by half.—*Gazette de Gynæcologie.*—*Times and Register.*

Dry Orerations.—Dr. Landerer (*Archiv fur klinische Chirurgie*, Vol. XXXIX., 1889,) says) that now that the great problems of antisepsis have been solved, it remains chiefly to improve in smaller matters our treatment of wounds, and to endeavor not only to cure all patients, but to do so *tuto, cito et jucunde.* Influenced by the fear of carbolic, iodoform, and sublimate poisoning in antisepsis, and by the difficulties of procuring sterilized fluids, in asepsis, he has for a long time operated without bringing a drop of fluid of any kind in contact with the wound. The instruments are boiled and kept in a weak carbolic solution. The hands and the field of operation are disinfected by a modification of Furbringer's method. As the wound is made it is dried with pieces of sublimate gauze and filled with wads of the same material. The larger vessels are tied. Angles and pockets of the wound are united by buried stitches. The wound is entirely closed, no provision for drainage and no opening for that purpose being left. The dressings are applied with moderate pressure. The results of the method, according to his experience in ninety major operations of all sorts, are:

1. All wetting and cooling of the patient are avoided.
2. The loss of blood is reduced to the minimum.
3. There is little or no danger of intoxication from absorption of the antiseptics.
4. The operation is shortened, as there is so much less time spent in arresting hemorrhage.
5. Healing is quicker and safer.
6. The antiseptic details are easier and more manageable.
7. The hands of the operator are not affected by contact with powerful antiseptics.—*Amer. Journal Med. Sciences.*

The Treatment of Retention of Urine from Prostatic Enlargement.—Mr. A. F. McGill, of Leeds, in opening the discussion of the above subject at the last meeting of the British Medical Association (*British Medical Journal*, October 19, 1889,) advanced the following propositions, supporting them by the histories of twenty-four cases occurring in his own practice and that of others. His remarks apply to the chronic, and not to the acute, form of retention. He asserts:

1. That prostatic enlargements which give rise to urinary symptoms are intravesical, and not rectal. * * * It has been long recognized that the severity of the symptoms in a case of hypertrophy of the prostate bears little or no relation to its apparent size as felt through the rectum, and it is also well known that a considerable number of men, aged fifty-five and upward, have prostates of an abnormally large size, though of

these only a certain proportion—say fifty per cent. suffer from urinary symptoms. This strange difference depends on the position at which the organ is enlarged. Prostates of immense size, which project toward the rectum and perineum, cause no urinary trouble, while severe symptoms may supervene when the prostate on rectal examination is apparently of normal dimensions.

In the twenty-four tabulated cases there was one characteristic common to all—the enlarged prostate projected into the bladder. There are many varieties of the intra-vesical growth.

We find (*a*) a projecting middle lobe—pedunculated or sessile; (*b*) a middle lobe with lateral lobes, forming three distinct projections; (*c*) the lateral lobes alone; (*d*) a pedunculated growth springing from a lateral lobe; and (*e*) "a uniform circular projection surrounding the internal orifice of the urethra." This last variety, described by Brodie, has in recent years escaped notice; it is better seen *in sutu* than in museum specimens, and is not of infrequent occurrence. It surrounds the urethra like a collar, and projects for a variable distance into the bladder.

2. That retention is caused by a valve-like action of the intra-vesical prostate, the urethral orifice being closed more or less completely by the contraction of the bladder on its contents. * * * When the bladder contracts on its contents, the contained fluid is forced on to the projecting prostate, and the urethral orifice is closed. The mechanism is the same—with one exception—whatever may be the variety of the enlargement. Whether there is a middle lobe, or lateral lobe, or a collar, the same valve-action occurs; and the more violent the contraction the more complete is the action of the valve.

3. That in many cases self-catheterism is the only treatment required.

4. That when the catheter treatment fails, or is unavailable, more radical measures are necessary. He admits that he is unable to prove this assertion, but restates his belief that a large proportion of the cases treated by the catheter sooner or later break down—in other words, that eventually the prostatic enlargement is the cause of death.

The breakdown may come soon, or it may come late, but in many cases it ultimately supervenes. The urine becomes thick and ammoniacal; the desire to micturate is continuous; the passage of a catheter relieves but for a few minutes; the suffering and discomfort are constant—day and night; life becomes a burden, and death a happy release. The greatest care cannot prevent this result, and the grossest carelessness does not always induce it.

5. That the treatment, to be effective, should (*a*) for a time thoroughly drain the bladder, and (*b*) permanently remove the cause of the obstruction. It is now some ten or twelve years since perineal drainage was introduced for the relief of cystitis in patients suffering from prostatic breakdown. The relief obtained in this way has been most marked, and the practice is well recognized and established. As soon as efficient drainage is effected the bladder ceases to be a receptacle; urine sweet from the kidneys flows through it; putrefactive changes are prevented, and acute symptoms cease. The relief, however, is only temporary.

6. That these two indications (of drainage and permanent removal of obstruction) are best fulfilled by a suprapubic rather than by a urethral or perineal operation. There are three ways in which it is possible to perform a radical operation for the removal of prostatic obstruction—the urethral, the perineal, and the suprapubic. Of these the urethral appears to be in every way unsatisfactory. In comparing the perineal with the suprapubic operation, he prefers the latter for the following reasons:

1. It is more generally applicable.
2. It can be performed with greater precision, and completed with greater certainty.

It insures complete and most efficient drainage. It may possibly be argued by some that the position of the suprapubic wound will prevent drainage, and that the urine will naturally escape more readily through a dependent perineal wound than through one above the pubes. Experience shows that this is not so. Drainage takes place more easily through the soft abdominal than through the hard perineal tissues.

4. It is equally safe. While making this assertion, he thinks it is right to draw attention to the fact that it is merely an opinion and does not rest on a statistical foundation; there being no statistics available for the purpose.

The following special points as to the *technique* of suprapubic prostatectomy are founded on an experience of thirty-seven supra cystotomies:

1. The quantity of water injected into the rectal bag, especially in cases where the prostate is abnormally hard, should be smaller than is usually recommended. Each case must be decided on its merits, but six or ten ounces are usually sufficient.
2. The bladder should be irrigated till the antiseptic solution used is perfectly clear. The quantity left in the bladder varies much, from ten to twenty or more ounces. The hand placed on the hypogastrium will show when the distention is sufficient.
3. In cases where the bladder is contracted with thick non-distensible walls, it will usually be inadvisable to perform this operation.
4. It is better to leave a catheter in the bladder till its cavity is opened, as it is a guide that expedites the operation. Care must be taken not to hook the peritoneal fold (superior false ligament) into the wound with the point of the instrument.
5. The linea alba is best divided by incising it immediately above the symphysis, and then dividing upward on a director.
6. Care must be taken to secure the bladder before proceeding to remove the prostate. This is best done by inserting two sutures through each lip of the wound, and fastening it securely to the deeper part of the abdominal wall. When the operation is completed, a third suture passed through the lower angle of the wound is additional security against urinary extravasation into the retropubic space.
7. The prostate should be removed as far as possible by enucleation with the finger, and not by cutting. The mucus membrane over the projecting portion having been snipped through, the rest of the operation is completed with the finger and forceps. In this way excessive hemorrhage is prevented. A pedunculated middle lobe can, however, be removed by cutting through its base. Hemorrhage is best arrested by irrigation with water so hot as to make it unpleasant for the hand.
8. A large tube should be inserted into the bladder, and the wound united above the tube by a deep and superficial row of sutures. The tube is to be removed in forty-eight hours.
9. The after treatment consists in keeping the parts clean, and washing the bladder and the wound, in exceptional cases, with a boracic solution.

Mr. Edward Atkinson, who had been the operator in five of the twenty-four cases, strongly supported the conclusion of Mr. McGill. Mr. Jordan Lloyd had operated in three cases, Mr. Bennett May in four cases, Mr. Jessop in four cases. They also in the main, indorsed the above propositions, Mr. May dissenting from the statement that suprapubic operation insures the most efficient drainage. —*Amer. Journal Medical Sciences.*

KOCHER'S METHOD OF REDUCING SUBCORACOID DISLOCATION OF THE HUMERUS.—By Charles A. Powers, New York. (*New Medical Record,* March 30, 1889.) The author from a careful study of this method derives the following conclusions: (1) Of the various luxations of the head of the humerus the subcoracoid is much the most common. (2) The method to be employed in its reduction is, *par excellence,* that of Kocher, which should be applied in every recent case. (3) This procedure is logical and safe, and may be easily carried out. Its careful, accurate and thorough employment will most invariably insure success at the first attempt. (4) It will not succeed in those cases, happily uncommon, in which the capsular ligament is severely torn. (5) The patient should be placed in the dorsal position. (6) It is attended with the least possible pain to the patient, and an anæsthetic is unnecessary. (7) It is practically without danger to the important vessels and nerves. (8) The question as to whether its success depends on the integrity of the anterior part of the capsule must yet be considered *sub judice.* (9) It rarely succeeds in the sub-glenoid form. (10)

It is applicable to the intracoracoid cases, but in these the elbow should be placed behind the posterior axillary line and external rotation should be maintained for two or three minutes. (11) In every case in which much resistance is met with during the early part of the second movement the position of external rotation should be steadily maintained for a short period before bringing the arm forward and across the chest.—*Annals of Surgery.*

On the Treatment of the So-Called Perityphlitic Abscess. By Robert T. Weir, M. D.—The author presents the following conclusions based on observations of 100 post-mortem examinations and thirty-two personal operations for so-called perityphlitic abscesses:

1. That all such abscesses originate in the peritoneal cavity, and there develop to an appreciable size before invading extra-peritoneal tissues or viscera.
2. That as stercoral accumulations or cæcal perforations are so rarely met with as causes of perityphlitic tumor or abscess, they should not be considered from a clinical view in any given case.
3. That in an attack of perityphlitis originating, as it generally does, as a perforation or as a gangrenous condition of the appendix vermiformis, all use of purgatives or enemata is in the beginning of the case to be avoided, and the immobilization of the patient is to be insisted on, and aided, if necessary, by anodynes.
4. That if a tumor be found, it be opened by a lateral incision as soon as symptoms, constitutional or local, indicate the formation of pus.
5. That if symptoms indicating an increase of the local peritonitis, such as the persistence of vomiting, spreading pain, abdominal resistance, and temperature elevation, continue, with or without the formation of tumor, for a period of forty-eight hours, the danger of the disease is greater than the proposed lateral or median laparotomy, which should then be immediately resorted to. In many instances even a less time should be afforded the consideration of the disease before operating.
6. If a general peritonitis be suspected, corroboration can often be obtained by abdominal aspiration with a fine needle employed in places other than in the right iliac fossa, and particularly by a deep, hypogastric puncture into the pelvis, the bladder being first emptied. However, if left in doubt, it is better to operate.
7. [*Sub judice.*] That if general suppurative peritonitis be found at a laparotomy, lateral or median, avoid too much handling of the intestines, and trust to either temporary irrigation with large glass tubes (Tait's), or, more rationally, to permanent or repeated irrigation and fluid distension of the abdominal cavity, as advocated by Greig Smith and by Penrose.
8. [*Sub judice.*] To meet the obstruction symptoms due to septic paralysis of the bowels, which often persist after a laparotomy for suppurative peritonitis, saline purgatives and repeated washing out of the stomach should be resorted to, even though vomiting be present to a marked degree. Enterotomy may also, in exceptional cases, be entertained.—*Medical News, April 27, '89.* (*International Journal of Surgery.*)

Tracheotomy in Diphtheria.—So soon as dyspnœa is pronounced, Van Iterson advises tracheotomy, whether it be due to trouble in the pharynx or larynx. This is a new and bold departure. Van Iterson justifies his procedure by claiming that most diphtheritic patients die of transmission of the process to the lungs, by aspiration, which is to be prevented by tracheotomy. Inferior tracheotomy, under narcosis, deserves the preference; it diminishes the danger from aspiration; fluids do not reach the larynx. After opening the trachea, he cleanses it, as well as the larynx and bronchiæ, by means of a bent sponge probe, and applies iodoform before inserting canula. Out of one hundred such cases fifty-five recovered. In twenty there were no false membranes below the wound; of these fifteen recovered. Four children were saved, although already asphyxiated.

Koch disputes Van Iterson's method, because he had better results without operating so early. In 1887, he had 42.4 per cent. recoveries; in 1888, 38.8 per cent, although the indication and technique after treatment were the same. He operated in one hundred and forty-one cases. Koch, of course, operates in the asphyxiated stage; otherwise he uses, in mild cases of stenosis, inhalations of vapor under a tent, with small doses of apomorphine, spts. ammoniæ anisat. and cassia, which frequently relieves it. But if it fails he endeavors to operate before asphyxia occurs. —*Times and Register.*

A NEW PROCESS FOR THE TREATMENT OF SEWAGE. — A private demonstration was given at the Wimbledon Sewage Farm on Friday last of a new process for the treatment of sewage, which is known as the "Amines" process. Among those who were present were Lord Rosebery, Dr. Klein, Dr. Hake, Dr. Campbell Pope, Dr. Abraham, Mr. Percy Dunn, Mr. Chatterton, Dr. Lloyd, Mr. John Barker, Mr. Bennett Williams, and others. The process consists in mixing with a solution of lime a certain proportion of "herring brine," and then passing the mixture into the crude sewage, which is afterwards in the ordinary way passed along the culverts into the settling tanks. It is claimed for the process that it recognizes the fact that the principal evil to be dealt with is the presence in sewage of teeming numbers of bacteria, to whose vitality the putrefaction of the organic matters in solution and all the attendant phenomena are primarily to be attributed. The result of the chemical union of the two substitutes above mentioned is the evolution of "Amine" gas, which is very soluble, and spreads with great rapidity through every part of the liquid sewage. By experiment this gaseous re-agent has been found to be antagonistic to the existence and propagation of every species of bacteria occurring in sewage and other similar waters. Thus the effluent, after the sewage has been treated by the "Amines" process, is found, according to Dr. Klein, to be perfectly free from micro-organic life, and it is at the same time inodorless and without color. These facts, which were shown to the visitors at Wimbledon on Friday last by Mr. Ellice Clark, together with other interesting details, which are shortly to be made public, were incontestible as far as they went. Undoubtedly a great step has been made towards the solution of the great problem of sewage treatment by the discovery of a reagent by which sewage can be practically and effectively sterilized. We shall be glad to refer to this matter again as soon as we come to learn something more of its practical application. The London County Council would be well advised to permit an experiment to be made of this process at the pumping station at Crossness.—*Med. Press and Circular.*

CREOLIN IN OBSTRETRIC PRACTICE.—Dr. Theophilus Parvin (*Practice*) applies creolin in cervical catarrh at intervals of three days. One teaspoonful to a pint of water is used as a vaginal injection. Benzoated lard with four per cent. of creolin is used by Parvin in tampooning the vagina in displacements of the uterus. For this purpose a long strip of absorbent cotton smeared with the ointment is tucked alternately into the anterior and posterior cul-de-sac until the vagina is packed either partially or completely as the case requires. Such a tampon has been left *in situ* by Dr. Parvin as long as six days, at the end of which time the only odor detected was that of creolin. In obstetrical practice creolin possesses the advantage of revealing itself both by sight and smell, thus obviating the dangers which accompany the use of sublimate and carbolic acid, which are often used in too strong solutions.—*Albany Medical Annals.*

CREOLIN—Professor Forster, of Amsterdam, found that in fæces mixed with a 2½ per cent. solution of creolin all the microbes except a few had disappeared in twenty-four hours. Typhoid bacilli were completely destroyed in fifteen minutes by a 1 per cent. solution. Cholera bacilli under similar conditions were destroyed in one minute. The bacilli of beri-beri, however, were not destroyed in twenty-four hours by a 1 per cent. solution of Pearson's creolin; they were killed in three hours by a 2 per cent. solution of Amsterdam manufactured creolin.-*Medical Press and Circular.* (*ibid.*)

THE DIGESTIBILITY OF BOILED MILK—It is now very regularly recognized, both by medical men and by the more highly educated section of the community, that it is a wise precaution to boil both water and milk before using them as a beverage, and the practice is becoming very common. The growth of pathogenic organisms in these fluids, especially in milk, is often very rapid, and thus diseases may be transmitted from one place to another. The temperature of boiling water puts an end to the life of the microbes, and also to the danger of infection. Another reason why boiled milk is so much used, especially in infant feeding, is that it is supposed to be more easily digestible than fresh milk. If, however, we can draw correct deductions from dogs to babies, it would now appear that this belief in the superior digestibility of boiled milk is founded on error. Dr. Randnitz, of Prague, has published, in Hoppe-Seyler's *Zeitschrift fur physiologische Chemie*, certain very striking experiments on this subject. He admits, what anyone may confirm for himself, that milk that has been boiled does not, on cooling and the subsequent addition of rennet, form a large coherent clot, as does fresh milk, but a floculent precipitate of casein is produced instead. He shows, however, by analysis of the milk itself and of the urine and fæces, that much less nitrogenous material is absorbed from milk that has been boiled than from the same milk when fresh. The digestibility of fat is apparently unaltered by boiling; the following figures, however, illustrate the fact just alluded to as the difference of digestibility of the proteid materials: In three days 15.6 grams of nitrogen were given in the form of fresh milk; of this quantity 13.3 per cent. was found in the fæces; the nitrogen of the urine accounted for 77.3 per cent., so that 9.4 per cent. was retained in store by the growing animal. The animal was next fed on boiled milk, and 10.4 grams of nitrogen were given in that form for two days: 18.6 per cent. of this was found in the fæces, 75.7 in the urine, so that only 5.7 per cent. was assimilated. The belief in the superior digestibility of boiled milk is, however, so widespread, that we should like to hear of the confirmation of the above remarkable results before we recommend mothers to leave off, what is, from other points of view, the praiseworthy custom of boiling the milk they give to their children.—*British Medical Journal.*—(*Southern Practitioner.*)

DIGESTIBILITY AS A TEST OF FOOD VALUE.—Dr. Sarah E. Post (*Diet. Gaz.*), discussing this question, concludes that—

1. Digestibility is not a complete test of food value.
2. Proteids are of the most value when limited in quantity and of the less easily digested forms.
3. Limitation of proteid food is particularly indicated in Bright's disease.
4. The sphygmograph furnishes important evidence in the pre-albuminuric stage of this condition.

Finally: "Predigested foods" and "easily digested foods" should be reserved for cases in which the digestion is in fault. The value of such foods in the management of the pathological conditions of the digestive tract is beyond question.

ACCORDING to Connelly Norman, F. R. C. S. I., who has rejected paraldehyde, urethran, amylene hydrate, methylal and hypnone as sleep-producers, sulphonal possesses the following advantages:

1. It is absolutely free from smell.
2. Otto states that it leaves in the mouth a faint, bitter after-taste. This, I myself noticed, but it is very slight, and patients always say it is tasteless.
3. It produced, in my cases, no gastric derangements and no troublesome head symptoms. It does not affect the appetite.
4. The sleep which it produces is relatively "natural." Its disadvantages are that it is bulky and practically insoluble, therefore difficult to administer; and that, perhaps owing to its insolubility, it is slow in action.

ANTIPYRINE is an efficacious remedy in hemicrania and migraine, but should not be given in those headaches which arise from uraemia and allied conditions.—*Med. Abst.*

ANTIPYRINE and phenic acid should not be combined.

Miscellany.

ERYSIPELAS.—Prof. Ebstein, (*Med. Chron.*, July). The healthy skin surrounding the infected portion is to be thoroughly cleansed with soap and water. A strip of healthy skin bordering on the diseased portion, after being thoroughly dried, is anointed with a 5 per cent. carbolated vaseline. The diseased portion treated with the same application; and in order to guard against the danger of infecting any healthy tissue, all the applications must be made *from* the healthy *towards* the diseased portion. The most brilliant and satisfactory result was obtained from this method of treatment, the erysipelatous blush quickly passing off, and the course of the disease being relatively shortened. This method was introduced into the Allerheiligen Hospital by Professor Rosenbach.—*Med. Abstract.*

IODOFORM POISONING AND BROM. POT.—(*Therp. Gaz.*, Sept.) A case of resection of a carcinomatous rectum is referred to in the *Wien. Med. Blatter*, in which symptoms of poisoning were produced through the use of iodoform. Under the use of bromide of potassium rapid relief was obtained. This condition is explained by Samter and Retzlaff as due to the fact that bromide of potassium exceeds all other salts in its power for dissolving iodine compounds. They state that if a test tube be half filled with a solution of potasssium bromide (1 to 3), fifty drops of tincture of iodine may be added without the iodide being displaced from its solution with the potassium bromide. This condition persists for several days, and bromide of potassium, of all the different salts recommended in iodoform-poisoning, is the only one which is capable of retaining the iodine in permanent solutisn.—*Medical Abstract.*

Reviews.

HYPNOTISM—Its History and Development. By Fredrik Bjornstrom, M. D., head physician of the Stockholm Hospital, professor of physiology, late royal Swedish medical councillor. Authorized translation from the second Swedish edition by Baron Nils Posse, M. G., director of the Boston School of Gymnastics. Paper, 30 cents. The Humboldt Publishing Co., 28 Lafayette Place, New York.

This is a timely book. Last August over one hundred and fifty "Savants of incontestable authority" met in Paris to discuss the progress and development of the mysterious agency known as "HYPNOTISM," and as a result of their deliberations the subject has entered the domain of Science, and evidently has come to stay. The author of the present work is well qualified to write on the subject—none better—and we bespeak for the work, which is specially translated for the "Humboldt Library of Science," an immediate success.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES

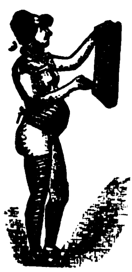
A YEARLY Report of the Progress of the General Sanitary Sciences, troughout the World. Edited by Charles E. Sajours, M. D. Lectures in Laryngology and Rhinology in Jefferson Medical College, Philadelphia, and Seventy Associate Editors, assisted by over Two Hundred Corresponding Editors, Etc. Illustrated with Chromo-lithograph Engravings and Maps. F. A. Davis, publisher, 1231 Filbert St., Philadelphia. Five volumes, price $15.

Those who are familliar with the Annual, know that it was first issued in 1888; and though the enterprise was a new one and planed on a very large scale, and many doubts as to its success were expressed by the knowing ones, American brains and enterprise triumphed. The medical profession the world over was astounded and pleased, and the medical press used strong words of praise and commendation. It would have been little short of a miracle had such a stupendous work been perfect in all its details, and so the editors and publishers have made improvements in the issue of 1889, and so, for instance, an index has been added to each volume. We do not know what the practice of others is, but when a new book is put into our hands, especially one for reference, we look for three things: First, a good preface; second, a good table of contents; and third, a detailed general index. If either of these is wanting we utter an audible sigh of disappointment; and if they are all wanting, as is sometimes the case, or very imperfect, as is *often* the case, said volume is laid aside as food for the ravenous book-moth. The Annual has not this fault. The table of contents is arranged under sections of the alphabet and can be found in a moment's time, while the index to each volume and the general index to volume V are superb. To the busy practitioner or collaborator, these two items are of immense value.

Another improvement, we notice, is the addition of a department of "Examination for 'Life Insurance' and 'Railway Neurosis,'" subjects that must be assumed of great importance when we take into account the fact that a vast army of doctors is employed in their prosecution.

We have not space to enumerate all the other improvements named. For the benefit of those not acquainted with the scope of the work we will add that it aims to condense to date the best of everything known, and the best thoughts of the best minds in our profession. The associate editors are men mostly of national reputation, while the corresponding editors comprise representative men in England, France, Germany, Austria, Russia, Spain, Switzerland, Holland, and many other nations, including China and Japan. The mechanical execution of the work is strong and handsome, with large, clear type, and over five hundred pages in each volume. Every practitioner who desires to be well up in his profession should be a subscriber.

Publishers' Page.



The Empire Elastic Bandage is specially adapted for varicose veins and surgical uses, is elastic porous, and absorbent, and the finest bandage now on the market.

"Its elasticity, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, is a feature unknown to any other bandage."

"The only bandage that is superior to the elastic stocking for varicose veins."

Bromidia.—I have used the Bromidia (Battle), and the results obtained have been really excellent. It certainly combines all the advantages of other preparations of this nature, while at the same time it possesses none of their disadvantages. The fact that it produces no unpleasant sensation on awaking, renders it specially valuable. **Dr. Lud. Marc,**
St. Nazaire-sur-Loire, France.

Pepsin is undoubtedly one of the most valuable digestive agents of our materia medica, *provided a good article is used.* Robinson's Lime Juice and Pepsin, (see advertisement, page viii, this number) we can recommend as such.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin on the American market, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

EMPIRE ABDOMINAL SUPPORT.

The Empire Abdominal Supporter is the best and cheapest supporter on earth. Specially adapted for all cases of pregnancy, corpulency, tumors, or all other cases of enlargement of the abdomen. For prices see large full-page advertisement in this journal.

PIL. SALINE CHALYBEATE TONIC (FLINT'S).

In the *New York Medical Journal*, May 18, 1889, Prof. Austin Flint, M. D., speaks very highly of the following formula as a tonic in Bright's disease, and also in simple anæmia, stating that he has given it in nearly every case in private practice in which a chalybeate tonic was indicated for some time past, and in only 1 case out of 35 did it fail to cause marked improvement. Prof. Flint states also that in five cases of Bright's disease, of which he has notes, this formula was the only medicinal remedy employed. In all cases the tonic seemed to exert an influence on the quantity of albumin in the urine. Dr. Flint's formula is as follows:

℞ Sodii chloridii (C. P.) ʒ iij.
Potassii chloridi (C. P.) gr. ix.
Potassii sulph (C. P.) gr. vi.
Potassii carb gr. iij.
Sodii carb (C. P.) xxxvj.
Magnes. carb. gr. iij.
Cacl. phos. praecip. ʒ ss.
Calc carb. gr. iij.
Ferri redacti gr. xxvij.
Ferri carb. gr. iij.
M.—In capsules, No. 60.
Sig.—Two capsules three times daily after eating.

In the great majority of the cases of anæmia, etc., in which the iron was strongly indicated, the tonic seemed to act much more promptly and favorably than the chalybeates usually employed. In a certain number of cases in which patients stated that "they could not take iron in any form," the tonic produced no unpleasant effects.

This formula is now furnished by Parke, Davis & Co. in pill form, and and reprints of Dr. Flint's article from the *New York Medical Journal* will be sent to doctors indicating their wish for them.

L. C. Carr, M. D., Professor of Obstetrics Cincinnati College Medicine and Surgery, Cincinnati, Ohio, says: "I have given Papine (Battle) a fair trial and am well pleased with its action, especially so in the case of an infant suffering with an attack of convulsions. Its action was speedy and safe."

Offensive Odor of the Breath, due to bad teeth or other causes, may be overcome, or at least greatly abated, by the habitual use of Listerine. Add a teaspoonful to a tumblerful of water for a mouth-wash and gargle, and if a little is swallowed, so much the better. Indeed, a bad breath is not unfrequently caused by the gaseous eructations of indigestion, and for this also Listerine is an excellent remedy, in doses of twenty to thirty drops in a little water.—*Sanitarian.*

For Sale.—A practice in eastern Oregon for $1500, doing a yearly business of $4,000, collecting $3,000. Good reasons for selling. Address, M. Dittebrandt, M.D., Elgin, Oregon.

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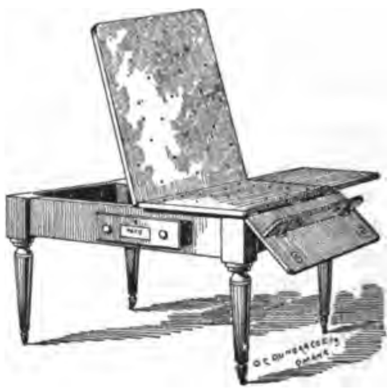

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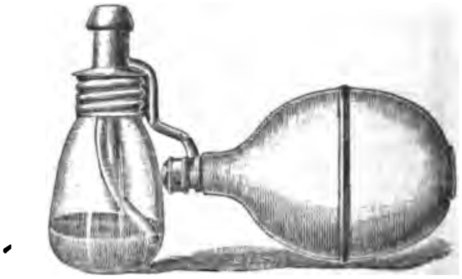

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THE OMAHA CLINIC.

A MONTHLY JOURNAL

DEVOTED TO THE MEDICAL PROFESSION OF THE WEST.

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Original Articles.

*FRACTURE OF THE FEMUR.

TREATED BY THE MODIFIED EXTENSION APPARATUS OF PROF. BARDENHEUER.

By A. S. v. MANSFELDE, M. D., Quality Hill, Ashland, Neb

On pages 397 and 98, in a review of a volume of 810 pages by Prof. Bardenheuer "On the Uses of Permanent Extension," the Annals of Surgery, Vol. 1, 1889, has this to say:

"For six years the author has occupied himself in improving the technique of, and extending the indications for, the method of permanent extension. He was led to generalize the treatment by extension by the excellent results gained in fractures of the femur, by combining the simple longitudinal extension (Burk's extension) with the action of weights attached laterally to the fractured limb and having for their object the correction of lateral displacements as well as rotation. * * * * It affects the reader with some surprise to view the manifold methods adopted by the author to achieve better results than by the usual methods employed for injuries of the extremities. But after reading what advantages the author claims for his methods he feels inclined to put them to the test, in spite of the increased trouble and vigilance called for on the part of the surgeon and the necessity of remaining in bed on the part of the patient, not to speak of the painfulness of the procedure in some cases." * * * *

This quotation constitutes all the reference in American medical literature to this subject, the importance of which induces the writer to lay before you in the first place, and through you, before the profession of America the work of Dr. Bitter, who says substantially:

The great progress, which has been made in the treatment of fractures of the femur by the method of extension, has not attained that measure of perfection, which in the fractures of other long bones, with a decided dislocation of the fractured ends, approaches an ideal cure. Whilst generally the possibility of an ideal union in other long bones is admitted, so that after some time it is almost impossible to discern the place of fracture, even upon a skeleton, this is seldom accomplished in fractures of the thigh, and denied as a possibility by many surgeons. Since the cure of fractures of the femur proceeds in the same manner as that of other hollow bones, where, with retention of the carefully replaced fragments, every displacement is avoided, we must look for the causes of the unsatisfactory results of the present methods to the uncertain coaptation and retention of the fragments of the femur. I will show you the shortcomings of the hitherto used methods of extension, and hope by demonstration of the enlarged and modified method of Prof. Bardenheuer to persuade you that with a correct use of it an ideal cure is very possible, and that with a consequential application of the principles, even in fractures with great dislocation of the fragments, ideal results may be anticipated.

I.

The extension in fractures of the diaphysis of the femur has hitherto generally been managed by the extension of the adhesive strips, which carry the *ansa* and the weights, to the place of fracture, being retained in place by circular bands of the same material, the extension then takes place parallel to the ideal long axis of the bone, i. e., in the elongated axis of the upper fragment; when this fragment is greatly abducted and flexed, the lower fragment is also abducted and raised; to adjust the dislocation, it is extended in a flexed position to the pelvis.

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*From the German of Dr. Bitter, Cologne, Deut. Med. Wochensch, April 18, 1889.

This simple, longitudinal extension is not capable of solving the problem of a correct co-aptation and rentention of the fragments.

The principal effect of longitudinal extension applies only to the perverse position of the peripheral fragment of the bone; it furnishes a counter-extension to the elastic retraction furnished by the muscles and other soft tissues running parallel to the bone, and only in so far as they, the elastic parts, displace the peripheral end from its longitudinal axis. The other displacements of the lower fragment (*ad axin*, *ad latus*, *ad peripheriam*) also brought about partly by the persistent elastic retraction and partly by other factors, such as the weight of the extremity, can be influenced secondarily only by the longitudinal extension, and their correction is indirect and generally incomplete. This extension, for example, has none, or very little, influence upon muscles placed concentrically or vertically to the long axis of the bone.

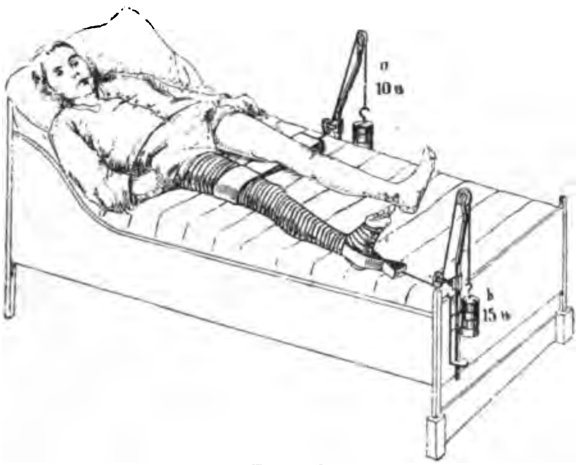

Figure I.

Still more unfavorable are the relations of the upper fragment. A correction of its position is brought about through the longitudinal extension exclusively by the transmission of the traction from the peripheral to the central fragment by the intervention of the firmer periosteum; the other more ductile tissues (muscles, tendons, etc.) are extended only after the entire separation of the periosteum, when they, also, will affect the position of the upper fragment.

If, therefore, the simple extension is to have any influence upon the upper fragment, it is necessary that the periosteum be intact; if this is not the case, as for example, in oblique fractures of the fermur with extended dislocation *ad latus et ad longitudinem*, and more so in *spiral* fractures, then the action upon the upper fragment is defective, and under circumstances totally opposite to what was intended. In case of a fracture at upper third of fermur, with an outward projection of fragments, the periosteum being torn at the point of the angle as it generally is, and intact only at the closed angle, simple longitudinal extension places the traction into the periosteal connections through the peripheral fragment, and through these the traction is transmitted, not as intended, through the central axis of the bone. Necessarily a further displacement laterally of the fragments takes place, the angle is increased. If the periosteum is not very much detached from the shaft, then the displacement of the fragment is small, but if the loosening extends upwards and downward from the seat of fracture, then corresponding with the lengthened traction axis, the angle increases.

Very little correcting influence is to be expected from the elastic muscles in lieu of the externally wanting periosteum, since these, the soft parts, are not very much stretched, as long as the periosteum is partly preserved. In case of an entire loss of continuity of the periosteum, it has been demonstrated by Prof. Bardenheuer, upon the the fresh cadaver, that fifty to seventy pounds of traction upon the muscles and other soft tissues is necessary to exert a demonstrable influence upon the upper fragment, a weight, which is not therapeutically practicable. The prospect, therefore, to adapt the upper fragment, in case of extensive laceration of the periosteum, is a very small one if sought by simple longitudinal extension. Surgeons have, therefore, attempted to place the lower fragment by extension in abduction, and eventually also in elevated position, in the extended axis of the upper fragment, which is also abducted. But it is almost impossible to place the lower fragment by abduction, or abduction with flexion in the axis of the upper fragment, because the angle of this to the pelvis cannot be correctly measured. Then the position of the upper fragment is not constant, but changes with every motion of the body and the angle, which it and the pelvis form, is changed with the differing phazes of the contraction and relaxation of the muscles, demanding invariably a modification of the direction of the lower fragment. Finally, here is also applicable, what has been already pointed out, that with an extensive tearing of the periosteum, the traction is not placed in the direction of the axis of the bone, but into the bridge of periosteum, when a further divergence of the points of fracture, where the periosteum is torn, will result.

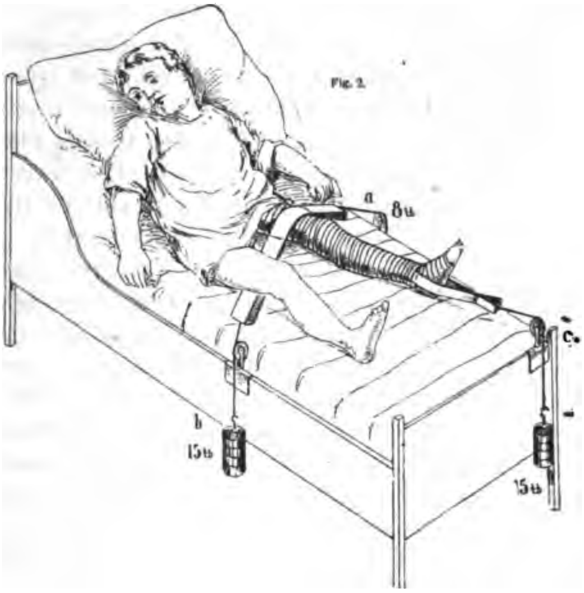

FIGURE II.

The really practical results of this use of extension prove the correctness of these remarks. Nearly all surgeons maintain with Malgaigne: That a cure of a fracture of the femur without shortening is only possible, when primarily no displacement of the fragments exists, or when, after reposition, there is an indentation (a suturing) of the fragments, a longitudinal displacement is accompanied invariably by shortening, and the loss of from 2-3 cm. in length, is still to be considered as a favorable result.

II.

To remove the enumerated drawbacks accompanying a simple extension our endeavors must be directed towards an amplified and modified method, by which other than the simple longitudinal displacement shall be influenced, and especially that the upper fragment be included in the effect of the traction. For this purpose we find that Prof. Bardenheuer has added in the first place his

Cross-extension, through which a traction is added, which exerts its force perpendicular to the long axis of the bone; this is adjusted to both the peripheral and central fragments, and through it the dislocated fragments are juxtaposed and firmly united, both in a frontal and sagittal direction to the long axis of the femur.

Further the *rotation extension* was added, which exerts its influence concentrically to the long axis of the bone. It consists in rotation inward, not only of the lower fragment of the bone, but of the whole limb below the fracture; the result is a rotation inward of the whole limb along its long axis. The adjustment of such a force simply below the fracture would result in a rotation of the bridge of periosteum only, which, of course, would not result in an exact correction and co-aptation of the fragments.

The third addition consists in the application of *counter leverage* brought about through extension, in cases of great literal displacements of the fragments, by the addition to the cross extention, in the opposite direction of their displacement and a traction of the joints belonging to the fragments in the direction of the displacement. Through this procedure the fragments are brought into their original relation to the long axis of the bone.

Fig. 3.

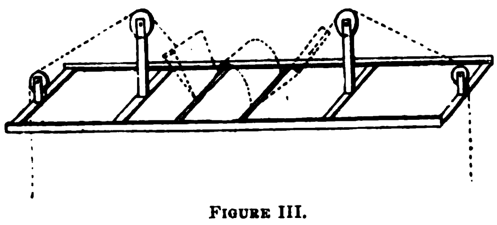

FIGURE III.

The object of these additions is not alone to obtain an exact *coaptation* of the fragments, but also a *retention* of the fragments in their corrected position; for by the constant action of the weights we obtain a persistent relaxation of the elastic tissues. Their endeavor to retract and thereby dislocate the fragments, bringing them again in angular relation, is effectually prevented.

Outside of these extension methods a change of the application of the extention bandage has been adopted by Prof. Bardenheuer.

The longitudinal and laterial adhesive strips, which are intended to carry the ansa and the weights, are not attached to the seat of fracture, as is usually done, but they are attached as high as the trochanter. Experiments upon fresh cadavers have demonstrated that the traction is not interferred with by so doing and that the effect of the traction is not transferred beyond the seat of fracture, as one after a superficial observation would assume. The adhesive strip is not fastened to the bone itself, but to the soft parts which are movable over the bone. The force of extension is exerted upon the bone lying peripherally to the fracture, and the traction is accomplished through the projections of bone or bones held by the circular bands of adhesive plaster. Not to speak of the application of this new method to bones, which without this, could not be treated by extension, because of their peripheral position, such as malleolus or radius fractures. The main importance of this modified bandage in fractures of the femur consists in the increased area of contact, which permits an immediate use of larger weights. And it is in cases of fracture of the femur, especially in such where the fragments are entirely detached, where an immediate application of larger weights, in grown persons to thirty pounds and more (longitudinal extension) are of great benefit, in that they counteract the elastic retraction of muscles and other soft tissues, and that they prevent an inflammatory *rigor* to take place during such retraction. A principal cause for the formation of deformities in fractures of the thigh with extended rupture of the priosteum and great dislocation of the fragments, is found in the difficulty which the retracted soft tissues offer to relaxation after a longer period of retraction. The dislocation, as the result of this condition, therefore, is not compensated. It has been shown that in two or three days after the injury, two or three times the weight that would have sufficed immediately after the injury had taken place, is necessary to compensate the retraction of the tissues. This is owing to a rigor of the muscles, which ensues immediately after the fracture and the accompanying retraction and contraction of the soft parts, and is the consequence of an inflammatory infiltration (*i. e.*, exudate,) into the inter and peri muscular connective tissue. If one succeeds by the use of larger weights to restore the normal length of the muscles, and retains them in this condition, until the inflammatory changes, induced by the trauma, rupture of muscles, etc., have disappeared, when a very much smaller weight, ten or twenty pounds, will suffice to maintain the parts in *statu quo*.

Fig 4

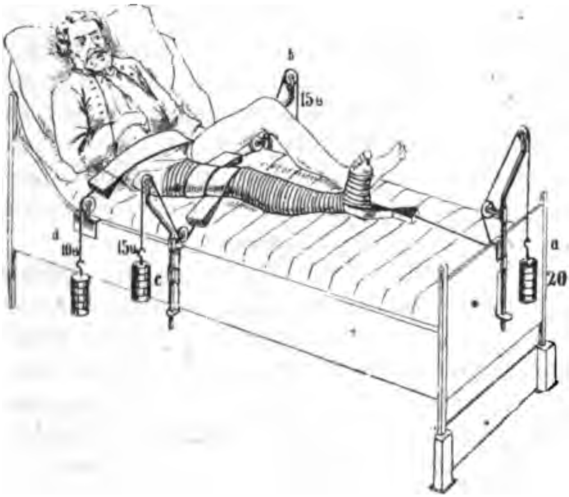

FIGURE IV.

PRACTICAL APPLICATION OF THE MODIFIED EXTENSION METHOD.

A correct diagnosis is very important; one wants to decide whether there is a dislocation or not, or whether the displacement of both fragments is in one direction, or opposite one another:

A.

Fracture in the upper third of the femur without loss of continuity, both fragments are dislocated outwards, with their closed angle also outwards. Here is necessary:

1. Longitudinal extension downwards, (pully b, I,) This is accomplished in the familiar way, with this difference, however, that the lateral adhesive strips are extended

to the trochanter, indifferent to the seat of fracture, and are fastened all the way up with circular bands of adhesive plaster. For counter extension a piece of rubber tubing is used with weights attached to it. In many cases the simple elevation of the foot end of the bed is sufficient for the purpose.

Fig. 5.

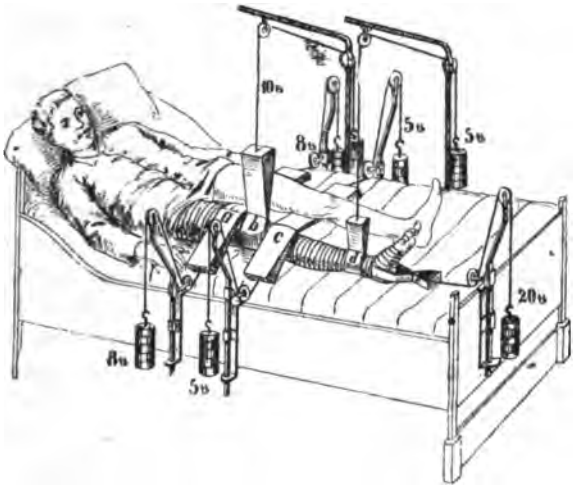

Figure V.

2. Cross extension from the exterior, to which both fragments are dislocated, from the point of the angle inward to the open side of the angle, (pully a, I.)

3. Cross extension of the pelvis towards the injured side (to the right) by means of a broad piece of adhesive plaster, filling the space between the trochanters and the spinæ anterior superiores. This pulley has the object of *fixing* the patient in a steady and correct position, and to prevent the deviation of the pelvis towards the uninjured side, through which the action of pulley *a* would be partially abolished. If, besides the lateral dislocation, also one forward exists, then pulley 2 must also exert an action backwards. This is done by fastening around the place of fracture a strip of adhesive plaster, which is sewed together laterally and is conducted not only laterally but also backwards. If this is weighted exteriorly with 8 pounds and interiorly with 15 pounds, a combined traction backwards and inwards results. See Figure II. If the dislocation is very extended forwards, then an apparatus as figured in No. III. is very useful. But also in this case a cross extension of the pelvis is indicated.

In most cases it is not necessary to deviate the longitudinal extension outwards to justapose thereby the lower fragment to the upper abducted one. In some cases, however, in which in consequence of the indentation of the fractured surfaces the simple cross extension at the seat of fracture is not sufficient, it becomes useful to add abduction to the longitudinal extension downwards, which will facilitate the more exact coaptation of the surfaces of the fracture. (See figures 1 and 2.)

B.

Oblique fracture of the femur with loss of continuity in bone and dislocation of the upper fragment outwards and of the lower one upwards. (Figure 4.)

1. Longitudinal extension of the lower fragment downwards. (Pulley a.)

2. Cross extension of both fragments opposite to the side to which they are dislocated;

(*a*), through cross extension of the lower fragment outwards (pulley c);

(*b*), through cross extension of the upper fragment inwards (pulley b).

In this manner the fractured surfaces are brought in direct contact.

If a great dislocation of the fragments exists and their retention is difficult, we can increase the action of the cross extension by a counter leverage of one fragment against the other, which is accomplished by a deviation of the longitudinal extension from the simple downward course to a decided inward leaning. The end of the lower fragment, which deviates inwardly, is in this manner forced against the upper fragment by leverage; the adhesive strip, surrounding the lower fragment and pulling outwardly, acts as the hypomochlium. (See figure 4.) In cases of fracture of the lower third with loss of continuity and great dislocation of the fragments this method of double leverage is very useful, since without it a replacement of the disloca-

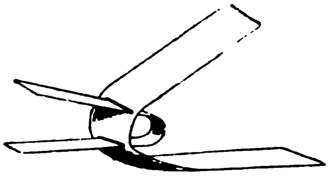

Figure VI.

tion and an abrogation of the muscle contraction, which produces the dislocation, is seldom accomplished.

3. Cross extension of the pelvis towards the effected side. (Pulley D, figure iv.)

Often very oblique fractions of the femur are complicated by a perverse rotation of the lower fragment outward. This is corrected by simple circular bands around the leg and the lower fragment, rotating these inward. (See pulley b and d, figure 5.)

In this manner all dislocations can be corrected:

1. Dislocatio *ad longitudinem* by longitudinal extension.
2. Dislocatio *ad latus et ad axin* by cross extension and by counter leverage.
3. Dislocatio *ad peripheriam* by extension through rotation.

It is, of course, necessary to arrange the apparati in each case in accordance with the manner of displacement of the fragments. Are, for an example, the fragments not literally dislocated but sagittally, (forward and backward), it is evident that the traction must be exerted in a sagittal plane (backward and forward.)

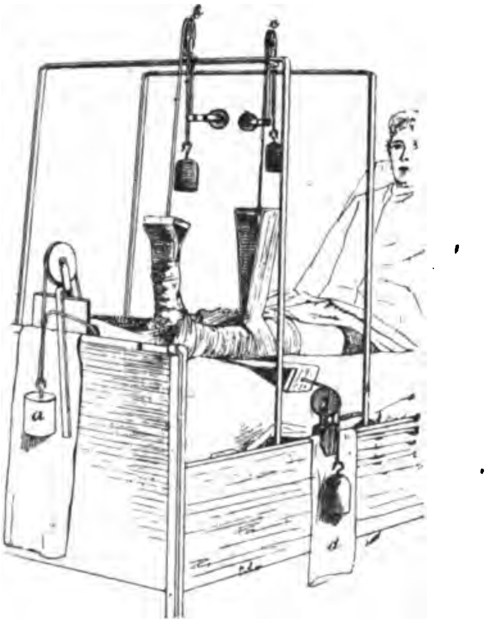

FIGURE VII.—See Addenda.

In a case of fracture near the condyles with a displacement of the upper fragment downward and forward, and the lower fragment backward and upward, and a rotation around the transverse axis of the limb. The extension should be made as follows: (See figure V.)

1. Longitudinal traction downward. (Pulley e.)

2. Cross extension; a, of upper fragment backward, (pulley a); b, of lower fragment forwards (pulley b).

3. Counter leverage of the fragments, which, because the difficulty of the compensation of the displacement is indispensible in this case. To increase the force of pulley b upwards, with a rotation around the transverse axis forward, it is necessary, because of the smallness of the lower fragment, to use the knee (pulley b, the bandage around the knee, acts as the fulcrum of the lever) and the lower end of the leg (pulley d) for leverage. Through pulley d a counter leverage of the upper end of the leg and the knee joint (with a traction backward of adhesive strip d, as hypomochlium) and a traction backward of the upper fragment is effected; also secondarily through the adhesive strip b, leverage is applied to the lower fragment by which it is forced against the upper fragment.

In children it is quite possible to use the vertical extension of Schede in conjunction with cross and other extensions, though longitudinal extension with the limb upon the bed is more sure.

It is remarkable that of late; i. e., since the use of this modified extension, no pseudoarthrosis (false joints) not only of the thigh, but also of all fractures so treated, has been observed (200 to 300 a year.) If an interposition of the soft parts is suspected, particular attention is given to the *firm compression* of the accurately adjusted fracture surfaces, so that the soft parts may readily atrophy and be absorbed. This is accomplished partly by the counter leverage above described, and partly by cross extension with the use of inter-located adhesive strips, (see figure 6) which are adjusted so that the smaller inter-located band catches the projecting end of the upper fragment, pressing it inward against the lower fragment, while the broader strip, in its place, presses the lower fragment against the external upper one. Only of late it became possible by this method to achieve consolidation in two cases of fracture of the humerus, where a permanent pseudo-arthrosis was eminent, though the consolidation was delayed from eight to ten weeks.

In regard to the weights which are to be employed, as has been already emphasized, large ones should be employed early in the treatment, for longitudinal extension, 30 pounds and more.

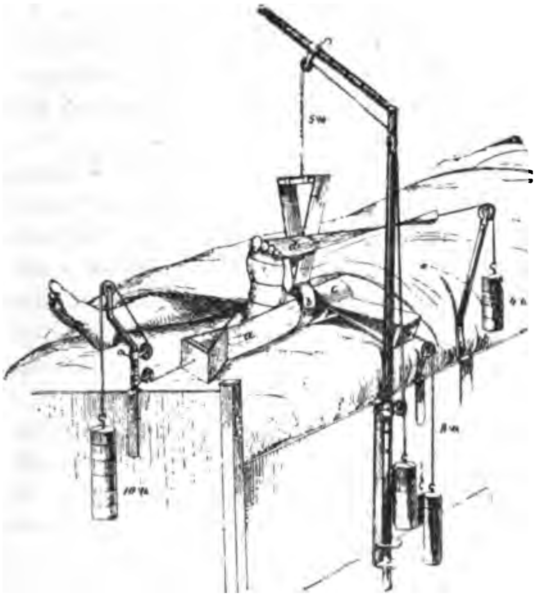

FIGURE VIII.—See Addenda.

When the fragments have been held in position for some time smaller weights suffice. It is advisable in a week after the setting of the limb to examine the relation of the adjusted parts, and to control any deviation that may have taken place by a change of weights. The time of consolidation is different according to age, constitution and kind of fracture, from four to six weeks. Yet it is advisable to employ extension for some time afterwards, since it is possible that by retraction of the soft parts a shortening, or slight deformity may take place, as we had occasion to observe in two cases. The cure seemed to be completed in six weeks. No deformity or shortening were demonstrable. Subsequently, after the removal of the extension, without other causes, such as walking or movement of the joints, a small bending, shortening and increase of callus was observable. The necessary supplementary extension removed these defects.

Just as in simple fractures this method is immediately applicable in cases of compound fracture, of course after cleaning and thorough disinfection; and if great laceration and contusion, or slight infection exists, in connection with drainage. The adhesive strips are not applied directly to the surface of the wound; this is first protected by antiseptic dressing and over this the adhesive strips are fastened in the same manner as in simple fractures.

A conspicuous result of the use of the modified extension is the small amount of callus which is formed, as compared with its production in simple longitudinal extension and in plaster of paris dressing. This is evidently explainable in the first place by the better coaptation of the fragments, since here a smaller amount of the cementing substance is needed for repair; the less exact the coaptation, the more callus is necessary, and secondly by a lessening of the irritation, produced by the pressure of the fragments upon one another, by the use of simple longitudinal extension, as compared with the plaster of paris dressing and other treatment. It is for this reason that even after an *apparent* cure, and the interruption of the extension, in consequence of the retraction of the elastic soft tissues, and the resultant interfragmental

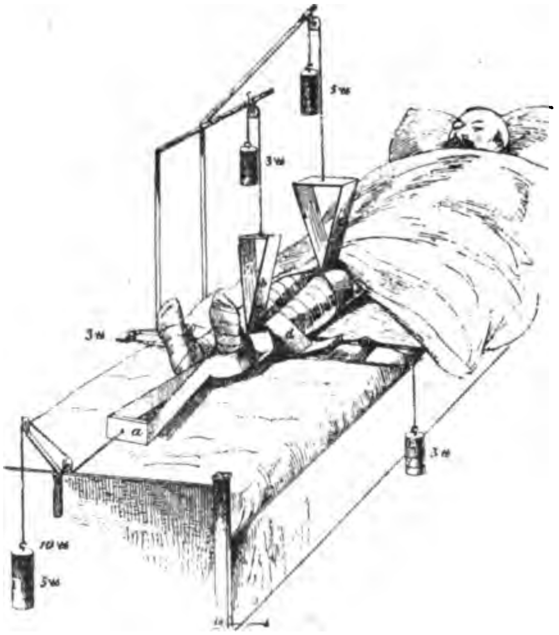

FIGURE IX.—See Addenda.

pressure, an increase of callus will take place.

The author concludes his paper, the importance of which I leave you to judge, with the recital of eighteen cases so treated, claiming perfect union and no shortcoming in any of the cases as the result.

I employed for measurement an instrument similar to the one described by Von Bruns in his book "On Fractures of the Lower Extremity." It consists of two arms, fastened together in right angle. The horizontal arm consists of a pliable metalic strip, which is applied so that the two spinae il. ant sup. are united by it in straight line, the convexity of the abdomen not interfering. The other vertical arm, a round stick, points, as soon as the pelvis lies horizontally, in the direction of the long axis of the body down between the lower extremities. This stick has two movable hands attached to it, which, fastened upon the level of two corresponding points of the legs, for an example the summits of the malleoli interni, will show between them the difference in the length of the corresponding extremities. I have used as measuring points the Spin. il. ant sup., the inner side of the linia interarticularis of the knee joint and the summit of the internal malleolus. I have satisfied myself by repeated measurements with this instrument upon fractured and healthy limbs, the patient lying upon a firm horizontal place, of its correctness. With some practice, a mistake of not more than ½ c m may be accepted as the limit.

For myself I have no excuses to offer, only in so far as I may have overestimated the importance of this new treatment of fractures of the femur.

Addenda.—In No. 33 of the German Medical Weekly, Dr. Bitter presents a description of the application of this modified extension to fractures of the legs. (See fignres No. VII, VIII and IX.) The publisher of The Omaha Clinic has kindly volunteered to print the cuts accompanying this article. An examination of the cuts by our readers will suffice to explain the method of using the extension splints in these fractures, without a reiteration on our part of the descriptions given by Dr. Bitter, since they are the same as given for fractures of the thigh.

[*]TRANSPOSITION OF THORACIC AND ABDOMINAL VISCERA — WITH MALFORMATIONS.

By J. H. Cleaver, M. D., Council Bluffs, Iowa.

Early in the afternoon of September 3, I was summoned to attend a man "having a fit" (as my messenger termed it) in a by street near my office. I reached the patient not to exceed two or three minutes after he had fallen, and in time to hear two or three gasps before death.

He was lying prone upon his back, muscular system relaxed, pupils dilated widely, mouth partially filled with blood and saliva and a most marked cyanotic appearance of the face, neck and hands. He was removed to the undertaking rooms of Field & Estep, the coroner, Dr. J. C. Watterman, summoned, who was shortly on hand.

I remained until his clothing was removed, and our attention was attracted by the peculiar formation of the thoracic walls; they were bulged and much thickened at the articulation of the ribs with the sternum; the right side of chest seemed to protrude much beyond that of the left, and the exostosis of ribs seemed to extend much further toward the axilla. There was a lack of symmetry in fact throughout.

Another peculiarity was the clubbed ends of fingers and toes, nails broad, thick and all seemed much larger than normal; these peculiarities, coupled with the fact of constant cyanosis before death, (which we learned from bystanders who knew him), the sudden termination of life at a time when there was no undue physical exertion or mental emotion, led both Dr. Watterman and myself to suspect some malformation of heart, or organic trouble. We spoke of this to the coroner's jury which had been summoned, and they requested us to make an examination.

Later in the afternoon we commenced our autopsy by making two vertical incisions the length of thorax, one in median line, the other somewhat beyond the nipple of left side; upon removing this section by transverse incision, we were astonished at the absence of the heart from its normal situation. Upon closer investigation we found the large blood vessels curving to the right, under ribs, at median line, and could notice the base of heart protruding. We then removed the wall from opposite side of thorax and an astonishing spectacle was before us—a transposition of the organs of thoracic cavity.

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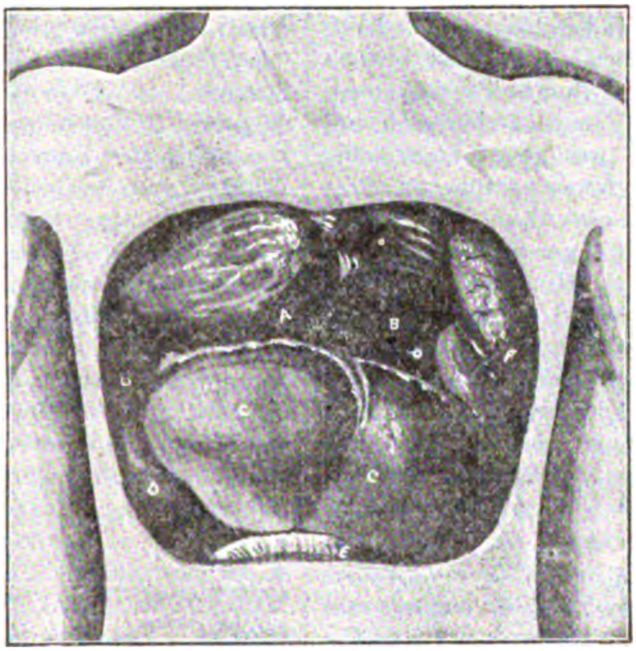
[*]Read before the Medical Society of the Missouri Valley, September 19, 1889, at Omaha, Neb.

The heart was located considerably higher, in addition to its transposition to right side of thorax, and seemed to occupy a much more horizontal position, the apex pointing toward the right axilla. The auricle to left being very large, forming almost a distinct sac, consequently the heart occupied considerable of the anterior space of the thorax. The whole vertical measurement of thoracic cavity was much less than normal. The lungs were confined to the posterior position of this cavity.



A. Heart. B. Auricle. C. Liver. E. Stomach F. Lungs.

Upon opening the abdominal cavity, the viscera were here also found transposed, the liver being very prominent and principally to the left of median line, but not a complete transposition to the opposite side. The stomach located upon the right side seemed to occupy a more vertical position than normal; the pyloric orifice emptying to left side. and as far as we could ascertain, the intestinal tract throughout being transposed. The spleen was found much higher, in addition to it being on wrong side.

Upon examining the lungs after removal, they were found to be malformed, apparently consisting of but three lobes, two of which formed the left and one the right; their combined weight was about 30 oz. There were also indications of tubercular deposits. The heart weighed about 16 oz. The left side, in the position which it occupied, was enormously dilated. I do not think there was much hypertrophy, the extra weight being found in the dilated walls of the side.

Upon discovering that we had an anatomical curiosity on hand, we invited in the profession generally, and many of them assisted in investigating the case. In order to obtain photographic views of viscera in position, we did not remove any of the organs at this time, and there was little investigation made after removal.

The origin and location of vessels leading to and from the heart, the condition of valves, apertures, etc., were not ascertained. We, however, opened the heart to learn the condition of septum between auricles, and found that there was little to obstruct or prevent free admixture of the blood of both auricles.

A brief history of this case, while living, was obtained from his brother-in-law.

Name, Frank Havens; age, 38; birthplace, Ohio; family history not learned. Was always sickly; at birth the physician in attendance told parents that there was something wrong with the child's heart, and that it would not live long. At ten years of age, he had to be carried to school, and all through life was a sufferer; could stand no exertion; always cyanotic, and at times would have profuse hemorrhages from chest, amounting at times, he said, to several pints; after one of these hemorrhages he would be sick for days, but would slowly recover. He had been treated by a number of physicians, but none of them had ever discovered the malposition of the organs.

When about ten years old, he spoke to his folks about his heart being on the right side, and they made light of it, which seemed to hurt his feelings, and he never spoke of it afterwards.

In looking up the literature on this subject, I find an article in Quain's Dictionary of Medicine, by John Curnow, under the head of Malformations. In speaking of congenital malformations, he says: "Since the appearance of the classical work of St. Hilare, congenital malformations have been grooped and classed. Their causes determined with such approximate accuracy, that in place of the superstitious beliefs and incredible absurdities which formerly prevailed, a distinct branch of pathological anatomy has been established, namely, Tertatology. Instead of considering a monstrosity as a presage of some misfortune, a proof of divine vengeance, or effect of witchcraft, etc., we now trace it to a malformation of the original germ, or some cause interfering with its development; starting from the normal standard we find varieties in development of all kinds in two series, namely, an ascending series from a more supernumerary digit, to double and even triple monsters. A descending series from the mere default of a digit organ, or union of digits, to monsters, with scarcely a trace of human structure, forming almost a shapeless mass. Besides these we may have excess, or defect in size of development of various organs and parts, or of the body en masse, leading to the formation of giants and dwarfs.

"In other cases developments and size are normal, but the viscera are transposed, and they may be general or partial.

"From the moment of fecundation the ovum is exposed to various influences which may alter its development, and it depends upon whether it is subject to them at an early period or later, as to whether complex or simple anomalies result. As to transposition, he says they may effect the entire organism in some of the lower animals, as in certain fishes, and mollusca, but in man it is limited to the thoracic and abdominal viscera; it varies in degree in different cases, sometimes affecting all the viscera, other times one or more organs. Dareste states the more general cases are due to the embryo heart taking a turn to the opposite side from that in the normal embryo. He has artificially produced similar deformities by incubating eggs placed obliquely so as to subject their extremities to unequal degrees of heat, thus causing an excess of development on one side.

"Bischoff, however, attributes them to an alteration in the normal position of umbilical vessels and alantois, so that the former turns to the left, and the latter to the right, and suggests that this might possibly influence the sight of internal organs."

In an able article on the subject of transposition, by George Jackson Fisher, in the "Reference Hand Book of the Medical Sciences," he writes as follows: "I was much surprised to find how little was written upon this subject. Encyclopedic works, such as Zeimsen, and the Cyclopædia of Anatomy and Physiology are entirely silent upon this subject. There is no treatise or even extended essay upon transpositions of viscera in the English language. The reported cases are extremely rare, a careful search through the seventy volumes of Rankin's Abstracts and the ninety-six volumes of Brathwaits Retrospect, result in failures to find the record of a single case. The whole series of thirty-eight volumes of the transactions of the Pathological Society of London contains only a half dozen cases, and the seventy volumes of the Medical Chirurgical Transactions, a still lesser number. The same may be said of the other extended series of periodical medical literature."

The statistics of transposition of viscera were collected with much care and labor by Wenzel Graber, and published in 1865, in Dubois Reichert's "Archives." His list contained reference to seventy-nine cases. Dr. Scheele added fourteen more. It is probable that all the literature of the medical science now extant would furnish less than two hundred cases.

Dr. Fischer has cited a large number of recorded cases, giving a brief outline of the principal facts in each case. It appears that "Cyanosis" (which was so well marked in the case under consideration) is not a constant concomitant, probably in those instances where transposition is complete, it is absent, and the subject may enjoy ordinary health. It appears, however, in a large majority of cases, and is undoubtedly due to malformations of the viscera whose functions have to do with the æration of the blood.. As to the exostosis, which was so extensive over the bones of thorax and the last phalanx of fingers and toes, and the extreme hypertrophied and malformed condition of nails that was such a noticeable feature in this case, I have failed to find mention of this condition as being present in any of the half hundred cases cited by Dr. Fischer in his valuable article. But in this case the strumous diathesis was more plainly marked than in any case that I ever remember of seeing, and the defective power of growth and development which is implied in the term "Struma" no doubt plays an important part in the etiology of at least a portion of this class of cases.

In conclusion I will state that I have endeavored to make my paper a brief one, in order that the society may have ample opportunity to hear from several other members that are equally cognizant with myself of the facts in this interesting case.

*MULTIPLE NEURITIS.

By W. O. Bridges, M.D., Prof. Clinical Medicine.

Gentlemen: The case which I desire to present before you to-day is one of a disease which you are not likely to meet with again during your course of lectures, on account of its comparative rarity, and I want you to study it carefully with me in order that you may be prepared to recognize the affection should it be your lot to meet with it in your practice.

The patient who will presently be brought in is a single man, twenty-eight years of age, a native of this country, and a farmer by occupation. He has lived in Washington territory the past two years, and prior to his present illness had always been well, temperate, and had had no venereal disease. He states that in August last he had an illness of from three to four weeks duration, which his physician pronounced malarial fever, but which from an analysis of the symptoms he gives me, viz: nose bleed, diarrhœa, rose colored spots about the abdomen and chest, leads me to think was typhoid fever. He had been free from fever several days, was able to be up and about his room, when a slight fever returned, and within three or four days he began to experience a weakness of his legs, accompanied by shooting pains through the muscles below the knees. This was soon followed by numbness, tingling and loss of power in these parts. The same symptoms without pain soon developed in the forearms and hands, and within a week he had lost all power over the extremities below the knee and elbow. At times there was swelling of the hands and feet with areas of perspiration. His brother tells us that in the earlier part of his illness there was marked sensitiveness to the touch of even the bed clothes over the affected members. He has had no incontinence of urine or of fæces and no girdle sensations about the chest or abdomen. The fever which ushered in these symptoms lasted only a few days, and since that he had enjoyed a fair appetite to the time of admission to the hospital. The pains in the legs and feet have given him the most trouble, frequently depriving him of sleep at night. He characterizes the pain as that of flying rheumatism He was admitted to the hospital on Nov. 3d, after a journey from Washington Territory. At my examination within twenty-four hours subsequently, he was practically helpless in bed as you see him now. His temperature was 99, pulse 130, and respiration 52. A physical examination of the chest gave negative results beyond an enfeeblement of respiration, which I attributed to his rapid breathing. At my next visit the following day, the temperature was 101.4, pulse 130, respiration 45. I then detected a small area of dullness on percussion and bronchial breathing between the inferior angle of the left scapula and the spine. The following day this area of consolidation had increased to involve the entire lower lobe posteriorly. The temperature was then 103.8, pulse 135, and respiration 33. To-day you will find the same condition with a tempera-

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*Clinical lecture delivered before the class of the Omaha Medical College at St. Joseph's Hospital, Nov. 6, 1889.

ture of 101.6, and pulse 120. There has been slight cough with expectoration not rusty, and little pain in the left side.

On looking at this man you observe a full face somewhat flushed from fever. You notice when he raises his arms, the hands drop and he has no use of the muscles below the elbow. The fingers are partially flexed, and the entire hand is swollen and glossy looking. You will also notice that the forearms look small from atrophy of the muscles, which are quite in contrast with the arms above the elbows. There is as you see tenderness in the muscles when they are pressed or pinched, and at the same time there is partial anæsthesia of the skin, as you observe in the remoteness of two points of pressure to be appreciated. When I apply a strong faradic current, there is no response from any of the forearm muscles, whereas the biceps contracts quickly. There is the same condition manifest in the legs and feet. The latter are very much swollen, reddened, and you see areas of sweating. There is entire abolition of the reflexors, both of the skin and the tendons. As in the arms, there is partial anæsthesia, extreme tenderness on pinching the calf muscles, atrophy and loss of faradic contractility. He can draw his legs up in bed, but observe that he cannot extend them. What power he has over the extremities is confined entirely to the muscles above the knee and elbow. As I stated in the history, he has perfect control over his bladder and rectum. Over the lower part of the left lung posteriorly we find dullness on percussion, bronchial respiration and bronchophony, with the vocal fremitus increased; so that we have a pneumonia complicating his nervous trouble. The complication was insidious in its development as pneumonia is frequently where it occurs in the enfeebled, the aged, and as a complication of some other disease.

The diagnosis which we make in this case is that of multiple neuritis, which is as the name implies, an inflammation of a number of nerves. It is a disease which has been correctly diagnosed, and properly understood pathologically only during the past few years, and you will not find much written upon it in the books. Many cases had been reported possessing the correct symptomatology, but they were variously described as cases of ascending paralyses, peripheral paralyses, spinal cord disease and the like. The authors who had been sufficiently close observers to picture the disease most accurately, were entirely unaware of its pathology and its proper place in the nomenclature of disease. With the assistance of the microscope and a number of autopsies closely investigated, the pathology of multiple neuritis became firmly established, and since 1883 it has been classed with the increasing number of diseases which are thoroughly understood.

The nerves, which are the seat of the morbid process, are found somewhat reddened and swollen owing to a congestion of the perineurium. The white substance of Schwann with the myelin sheath are found to have undergone a degenerative process, and the axis cylinder segmented and broken up into parts which become granular. This degenerative process may proceed to such an extent that the entire contents of the endoneurium may be absorbed and nothing remain of the original nerve but a band of connective tissue, made up of the peri and endo-neurium with its inflammatory changes. The disease is practically a parenchymatous inflammation of the nerves and the nerves involved are generally those of the periphery. If the degenerative process has not progressed to the entire destruction of the myelin sheath and the axis cylinder, a regenerative process may become established and entire restoration of the nerve occur with recovery of function. This is said to occur in the majority of cases. The process is a slow one and consequently recovery is tedious.

The causes of multiple neuritis are acute arsenical poisoning, lead, alcohol; the infectious diseases as diphtheria, variola, typhoid and typhus fevers; and the action of cold. Diphtheritic and lead paralysis are varieties of multiple neuritis. Many of the reported cases are the result of the abuse of alcohol and before the disease was well understood these cases were called alcoholic paralysis.

I am not aware of a case reported following typhoid or malarial fever and in this connection ours becomes particularly interesting.

The diagnosis is at times difficult. Spinal cord diseases and multiple neuritis present many symptoms in common, and thus differentiation is important, inasmuch as the former lead usually to a fatal issue, whereas the majority of cases of the latter recover. The affections with which it is most liable to be confounded are, locomotor ataxia, anterior polio-myelitis and diffuse myelitis. Ataxia, pain, loss of the tendon reflex and sensory disturbances are common to multiple neuritis and locomotor ataxia. In the former the rapid onset of the ataxia, the prominence of numbness and anaesthesia, the tenderness of the muscles and nerves, the occurrence of actual paresis with atrophy and the absence of bladder symptoms, will point inevitably to multiple neuritis. In diffuse myelitis there are present, girdle sensations about the chest or abdomen, interference with the function of micturation and defecation, bed sores and often-times cystitis, all of which are absent in cases of neuritis. Then again in the former, the paralysis is ascending as from the legs to the thighs, whereas in the latter it is from the legs to the forearms; the arms and thighs frequently escaping entirely, as in our case.

Atrophic paralysis with loss of reflex is found also in cases of anterior polio-myelitis; but in multiple neuritis the onset is more gradual, and the paralysis is preceded by numbness and pain. The tenderness of the muscles and nerves and the sensory symptoms persist after the invasion of the paralysis in neuritis.

In the diagnosis you must take into consideration the symptoms collectively with the history of the case; frequently the preceding illness or habits of the patient will throw a flood of light on an obscure case, and in this connection you must bear in mind the various causes which give rise to the disease. The symptoms which, taken together, make our diagnosis in this case reasonably certain, are: the history of typhoid fever immediately preceding; the presence of numbness and tingling; the flying pains, which have been persistent; atrophic paralysis, involving the legs and forearms; tenderness of the muscles and nerves involved, and the absence of bladder and rectal symptoms. The presence or absence of the latter will often enable you to discriminate between paralysis of central and peripheral origin. The prognosis in our case is determinable by the result of the complicating pneumonia. Should this resolve, as seems more probable to-day, the chances are more in favor of his ultimate recovery, and I base this hope on the limitation of the neuritis.

The treatment of this case has been directed thus far particularly to the pneumonia, and has consisted in the application of poultices to the chest and the administration of carbonate of ammonia with quinine and tr. nux vomica. Later on we will put him on a course of iron with nux vomica, and if in a reasonable time there is no improvement I will substitute iodide of potash in gradually increasing doses. Treatment of the muscles and nerves will consist in the application of the galvanic current on alternate days and friction of the surface with passive motion of the joints. The galvanic current is preferred in these cases, for the reason that there is response from the muscles when the faradic would not elicit it. The contraction is a slow one, and is known as the reaction of degeneration.

NOTE—Dec. 7th.—The pneumonia in the case reported entirely disappeared in the course of ten days, and at present writing there is marked improvement in the flexor and extensor muscles of the hands and fingers.

*LEGISLATION IN THE PREVENTION OF TYPHOID FEVER.

By H. GIFFORD, M. D., Oculist and Aurist, Omaha.

Whether we shall ever be able to prove the specific character of the typhoid bacillus as completely as has been done for that of tuberculosis is questionable. In spite of isolated reports to the contrary, the great mass of evidence indicates that the disease cannot be conveyed to the lower animals. The latter can be poisoned by the ptomaines contained in cultures of the bacillus, but a true infection has probably never been obtained; so that unless criminals can be used for the purpose, it is not unlikely that the final link in the experimental chain will remain wanting. For practical purposes, however, the circumstantial evidence in favor of the specificity of the

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*Read before the Omaha Medical Club, November 22, 1889.

bacillus is overwhelming, and forces upon us the necessity of destroying it wherever it is feasible.

The non-transmissibility of the disease to the lower animals, while a misfortune from an experimental point of view, is, of course, fortunate for mankind generally, as it simplifies the problem of its prophylaxis greatly as compared, for instance, with that of tuberculosis. On the other hand, the power of the bacillus to propagate outside the body may possibly, though not probably, prove to be such as to ever render our prophylactic efforts but partially effective. The evidence on this point, *i. e.*, on the saprophytic properties of the bacillus, is somewhat conflicting. According to Meade Bolton (Zeitschrift fuer Hygiene, I, p. 176) the bacilli or their spores (if they have true ones; this is disputed) retain their vitality in ordinary well water for something more than a month, steadily diminishing in numbers, however, from the first. Uffelmann (Centralblatt f. Bacteriologie, V, 15-16) found that in fæces mixed with urine the bacilli lived at least four months, and was inclined to admit the possibility of an increase at some time during this period. Karlinski's results (Cb. f. Bact., VI, 3) however, indicate that Uffelmann's estimate of their vitality needs some qualification, for while, in typhoid stools, he could detect the bacilli after about three months, when the fæces were mixed with sewage containing quantities of the bacteria of putrefaction, the typhoid bacilli disappeared within three weeks. This last figure, however, probably underestimates the average life of the bacillus more than that of Uffelmann overestimates it, for the sewage of cities into which it is generally deposited is usually quickly diluted by being poured into some body of water where the influence of the putrefactive bacteria becomes, at once, reduced. But we are less concerned with the minimum duration of the life of the bacillus than with its average or maximum duration, and it is interesting to have undeniable proof from the laboratory of the existence of the germ outside the body for at least four months. This is ample time, for instance, for Sioux City typhoid germs to be delivered in good condition through our water-pipes; and if infection from this source is rare, it is probably due rather to the immense dilution of the sewage than to the dying out of the bacilli before they can reach us.

Regarding the saprophytic life of the bacillus under more favorable circumstances, the testimony is general that some of our commonest articles of food serve excellently well as culture media; and this suggests that in estimating the danger of allowing the stools to go undisinfected we must take account of other possible modes of infection than that by drinking water. It seems to me that Flugge (Die Microorganismen, p. 203), is justified in objecting to the almost exclusive stress which, in Germany at least, is laid upon the water supply as a source of typhoid infection. From the nature of the case it is the only mode of infection which can be proved with any certainty, and it is probable that in towns and cities the great majority of cases occur in this way, but the common occurrence of isolated groups of cases in country practice indicates that the germ is sometimes carried by the air, either to the pharynx of the patient, whence it is swallowed, or to the food and drink, where, under favorable conditions, it might develope so as to infect an entire family, or if the food happened to be in a restaurant or store, a number of persons from different families, in which case it might be difficult to trace any connection between the cases.

With this possibility in mind it seems not unreasonable to explain the greater frequency of the disease during dry seasons, by the greater chance which such seasons give to the germ of being transported through the air, rather than by any special influence of the drought or the ground-water, as Pettenkofer supposed. This also indicates an objection to turning undisinfected stools even into bodies of water that are not used for water supply; the ocean or its inlets, for example. The germs might easily be washed up on the shores, where they might dry and be sown again by the wind. Undisinfected stools put into tight cess-pools and well-placed and managed privy-vaults, probably seldom do harm, if left there; but beside the dangers of overflow and seepage, it is the practice in Europe, and the custom is sure to spread in this country, to utilize human excrement for manure which is spread once or twice a year upon the fields. The danger to the well-water of a district from this practice is less than would at first thought seem probable, for Frænkel (Zeitschrift f. Hygiene, II and III) has found that the soil, no matter how filthy at the surface, at a depth of 1½ to 3 metres, according to the nature and the uses to which it is put, is practically germless; and that the ground-water, even under so strongly contaminated a surface as in the city of Berlin, is also free from bacteria. Still, when the soil is underlaid at no great depth by rock, the water may reach its crevices without being fully filtered, as is shown by the experience of Thoinot (Abst. in Centralblatt f. Bact., VI., 3.) In this case a plateau in the neighborhood of Havre was, toward the end of the years 1886 and 1887, for the first time, manured with the contents of the privy-vaults and cess-pools from the city. The soil of the plateau rested immediately on a chalk formation forty metres thick, and this in turn upon a layer of clay which collected the water for one of the sources of the city supply. The use of this manure was followed, in 1887 and 1888, by a very severe epidemic of typhoid, with 697 deaths. Thoinot, in investigating the filtering qualtities of such chalk formations, found that spring water which had passed through at least twenty-five metres of the chalk. still contained quantities of germs, owing of course to the water having followed crevices rather than having passed through the chalk structure proper. To my mind, however, this method of disposing of undisinfected sewage is as objectionable on account of the facility which it affords the germ of drying and being transported by the wind, as on account of the danger to the water supply; and the same applies to the throwing of typhoid stools upon manure heaps or simply upon the ground; something which must occur daily in thinly settled portions of the country.

At present, so far as I know, the legislation, outside the military departments, directed directly against the spread of typhoid is, in this country, confined to the custom in some cities of requiring all cases to be reported as contagious. Many physicians, perhaps the great majority, give directions as to the disinfection of the stools, but this is voluntary on the physician's part and the people carry out the directions or not as they choose, and when it is considered that until within a few years we had no positive knowledge as to which disinfectants in common use killed the germs, nor how much of the agent selected it was necessary to use, it is evident that the bacillus has run very little chance of being exterminated On the other hand, the probability that the disease is confined to man and that the bacillus propagates rarely outside the body, under natural conditions; together with the fact that it leaves the body entirely or nearly so with such easily controlled excreta as the fæces and urine, makes it seem not unreasonable to suppose that efficient legislation, over large areas, may practically banish the disease from the civilized world. I say over large areas, because what each community does toward destroying the bacillus is no more for its own benefit than for that of its neighbor. Proper disinfection in Omaha, at least in the sewered districts, would be less for her own advantage than for that of St. Joseph or Kansas City, and even the whole state would fail to receive her full due from proper legislation if the breezes and streams from adjacent states were continually to bring fresh germs to her territory. Probably the quickest way to obtain wide-spread action in this direction, would be for the International Medical Congress to delegate members from the various countries, whose duty it should be to bring the matter before their national societies; these in turn appointing members of the state or provincial societies to see that the latter take the proper steps toward securing the passage of the desired bill in their respective communities.

Beside providing for the compulsory disinfection of urine and excreta, the bill should specify the disinfectant to be used and the manner of using it, leaving freedom to boards of health in changing details in accordance with the progress of our knowledge. At present, where systematic disinfection is attempted, substances of good general repute as germicides are often used without any proof ever having been given that as used they are efficient. To establish the value of a substance for the particular disease it must be shown not only that it kills the germ in cultures, but that it retains this power when the germ is mixed with fæces. Seitz (Rep. in Centralblatt f. Bact., II, 25) has found that chemicals which killed the bacillus in cultures within fifteen minutes, were not certainly efficient in three days, when the germ occurred in fæces. Such inefficiency was possessed, among others, by 5 per cent. solutions of the sulphates of iron, copper and zinc. More recently Uffilmann (Berlin, Klin., Wochenschrift, 1889, 25) has examined the action of a number of germicides when applied directly to the fæces with results calculated to shake our confidence in the rapid action of some of our most potent agents. In some experiments the solutions tested were mixed with equal parts of fæces to which typhoid bacilli had been freely added. Tested in this way 5 per cent. carbolic solution was found not to have killed all typhoid germs after an hour's action. When the neutral sublimate solution 1:500 was used, typhoid germs lived half an hour or more.

Most efficient of all was 50 per cent. sulphuric acid. This not only killed the typhoid bacilli quickly but the ordinary fœcal bacteria, which, in the tests with carbolic acid and neutral sublimate were living even after twenty-four hours, were all killed within two hours. Next in the scale of efficiency was the acid 1:500 solution of sublimate. With this, typhoid germs were killed within fifteen minutes, and all the other germs in less than twenty-four hours. As to the effects of calcium hydrate Uffelmann's results differ somewhat from those of Pfuhl, (Zeit. f. Hygiene, VI., p. 97) who has made the action of this substance the subject of a special inquiry. The latter found that by an addition of 2 per cent. by volume of 20 per cent. lime-milk (a suspension of slaked lime in water) to the fæces, they were entirely sterilized inside an hour. Uffelman, on the other hand, added to the fæces 2½ the amount of lime-milk, and while no typhoid bacelli were found living after an hour, some other germs lived at least twenty-four hours. This difference in results is probably due to the fact that Pfuhl worked with typhoid stools containing almost pure cultures of the specific bacilli while Uffelmann added the bacilli to ordinary fæces.

A thorough mixture of the stools with the disinfectant is obviously important, and luckily, most stools needing disinfection have but little consistency; but where this is not the case it is probable that the 50 per cent. sulphuric acid solution would be the most reliable agent, as it decomposes the harder lumps so as to permit a more thorough contact with the germs. At present, therefore, it would seem safe to specify that except when the stools are unusually firm, twice the volume of lime-milk or an equal volume of the ℓ per cent. acid solution of sublimate (sublimate 2, hydrochloric acid 0.5, water 1,000) be added to urine and fæces and allowed to act at least an hour. Where especially hard stools occur 50 per cent. sulphuric acid should be used for two hours.

Urine should be sterilized also, for although the bacillus probably never occurs in it unless there is some kidney lesion, such lesions occur not infrequently. Seitz (loc. cit.) has found the germ in the urine with plain evidence of nephritis (albumen and desquamation) in two cases out of seven. Linen should be kept by itself in a pillow case or similar receptacle, till it can be sterilized either by the sublimate solution or by boiling in a covered vessel for two hours.

Finally, while making it a criminal offence to neglect the provisions of the bill, it should be provided that the expense connected with the disinfection be born by the community. This for the obvious reason that while in large cities with sewage facilities, disinfection is often chiefly for the benefit of other cities farther down stream, in smaller places a man disinfects no more for himself than for his neighbor into whose well his cesspool may seep or overflow, and into whose mashed potatoes bacilli from his dried and powdered fæcal matter may blow.

The same bill could of course be made to enforce such disinfection as seems rational in other contagious diseases, but I have considered typhoid in particular because of our comparatively perfect knowledge of its etiology and the manageable character of the excretions with which its germ leaves the body. With scarlatina, diphtheria and measles, so little is known of the natural history of their respective germs, that for the present, we are obliged to fight somewhat in the dark.

MINUTES

OF A MEETING OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY, AT SIOUX CITY, IA., DECEMBER 19-20, 1889.

The Society met in the Academy of Music Thursday afternoon and continued through Friday, with M. L. Hildreth, Second Vice President as presiding officer.

The following physicians were in attendance: Drs. Bergen, Gillette, Knott, Shellabarger, Coit, Gifford, Lord, Crummer, Hildreth, Lacy, Gapen, Jonas, Rosewater, Geiger, Pitts, G. L. Ross, Park, Eichelberger, Conniff, J. P. Johnson, B. Johnson, Brown, Warren, White, Dunlavey, Blair, Hoyt, Hamilton, Hornibrook, Sherman, Kempker, Ingels, Ashworth, Davis, Biller, Barr, Evans, Hensel, Leisenring and Jepson.

The following were elected to membership:

C. Ashworth	Smithland, Ia.
J. G. Biller	Correctionville, Ia.
R. H. Brown	Sioux City, Ia.
W. J. Ballah	Washta, Ia.
D. D. Barr	Hubbard, Neb.
R. E. Conniff	Sioux City, Ia.
J. G. Conley	Elk Point, Dak.
J. C. Dunlavey	Sioux City, Ia.
M. H. Evans	Emerson, Neb.
Robt. Gilmore	Omaha, Neb.
Jacob Geiger	St. Joseph, Mo.
L. M. Hensel	Omaha Agency, Neb.
G. P. Hevering	Walnut, Ia.
W. H. Hoyt	Sioux City, Ia.
E. Hornibrook	Cherokee, Ia.
J. B. Ingels	Meriden, Ia.
M. V. B. Johnson	Sioux City, Ia.
J. F. Kempker	Missouri Valley, Ia.
H. G. Leisenring	Wayne, Neb.
T. P. Livingston	Plattsmouth, Neb.
J. M. O'Connell	Ponca, Neb.
Barton Pitts	St. Joseph, Mo.
W. L. Pierce	Tekamah, Neb.
George Park	Sioux City, Ia.
J. D. Peabody	Omaha, Neb.
G. J. Ross	Sioux City, Ia.
John Stout	Pender, Neb.
T. D. Thompson	West Point, Neb.
A. L. Wright	Carroll, Ia.
J. N. Warren	Sioux City, Ia.

Bills were allowed as follows:

For hall rent	$20.00
For clerk hire	4.50
For stationery	1.80

On motion the chair appointed Drs. Geiger and Pitts, of St. Joseph, Mo., and Dr. Carter, of Omaha, a Committee of Arrangements for the next meeting of the Society.

On ballot St. Joseph, Mo., was selected as the next place of meeting, to be held March 20, 1890.

The following papers were read and discussed:

1. Keratitis Interstitialis, Geo. Park.
2. A Diagnostic Conundrum, R. H. Brown.
3. Differential Diagnosis of Diseases of the Spinal Cord, Clark Gapen.
4. Some Cases of Peri-Metritis and Para-Metritis, E. Hornibrook.
5. Spina Bifida, A. F. Jonas.
6. Vesical Hemorrhage in Pregnancy, M. A. Cleaves.
7. Bacilli Tuberculosis, Their Etiological Role in Surgical Affections, Wm. Jepson.
8. Puerperal Convulsions, C. Rosewater.
9. Remarks on Treatment of Nose and Throat Diseases, L. B. Gillette.

Adjourned.

T. B. LACY, *Secretary Pro. Tem.*

NOTES.

SIR JOSEPH LISTER, the father of modern surgery, has again been heard from. He gives us as an antiseptic, the cyanide of zinc and mercury, for which he claims the combined qualities of high germicidal power, both as to prevention of development and destruction, with a minimum of irritation.

CORROBORATIVE testimony to the value of chloride of barium in heart disease is furnished by H. A. Haze, *Journal de Medicine de Paris*, 1889, Vol. XVI., No. 15, who has prescribed a 1 per cent. solution in doses of 1.5 to 2 gms. for children and 5 gms. for adults, two or three times a day, with good effect, both in lesions of the mitral and of the aorta, and in functional disturbances of the heart. It acts as promptly as digitalis in slackening and regulating the pulsations, but produces less tension of the artery than is felt after the exhibition of the latter drug. No renal troubles resulted in the seven cases reported. It has the advantage of being almost tasteless.—*Cleveland Med. Gazette.*

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

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OMAHA, JANUARY, 1890.

PHTHISIS.

THE TREATMENT BY INHALATIONS.

(The Weigert Hot Air Inhaler.)

That Anglo-mania in medicine is not necessarily always progressive is aptly demonstrated by the relation of the medical press and the profession to Weigert's hot air apparatus. This theme was supplied by the inadvertent creeping in to the pages of the November issue of this journal of an article taken from the London *Lancet* of September 14th, page 540, for which we are constrained to ask the pardon of our readers. The subject of this article was the inhalation of *super heated* air with the apparatus of Weigert, the use of which is said to have benefited the patient greatly. Now the same, yes even more apparent benefit is derived from the use of Solis Cohen's apparatus for the inhalation of compressed and rarified air, and this benefit is evidently not owing to the *temperature* of the air inhaled, but to the *mechanical effect of the pressure* under which the inhalation and exhalation proceed.

Solomon Solis Cohen in a recent paper (*New York Medical Journal*, November 23d, 1889,) has very forcibly explained this action. He says:

> The physiological effects of these expedients are very apparent. The effect upon the circulation of increasing the pressure within the thorax, as compared with the pressure upon the periphery, by inhalation of compressed air, is, in brief, to drive the blood toward the point of least pressure—that is, out of the thorax. On the other hand, the effect of exhaling into rarified air, thus increasing the pressure upon the periphery, as compared with that within the thorax, is to drive the blood into the heart and lungs.
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> The effect upon the respiratory act is equally obvious. If the pressure within the thorax be made greater than that without, expansion will be effected with less muscular effort. The air cells are fully dilated, and secluded areas of lung tissue are forced open, where the pathological process is not of such a nature as to prevent this result. There is also pressure upon the inflammatory congeries of new cells and upon congested blood vessels, tending still further to increase the amount of available lung tissue, and to a certain extent to relieve congestion and promote resolution of inflammations. It acts as pressure by means of a bandage; acts in external inflammations. The activity of the pulmonary circulation being increased as well as the activity of the systemic circulation, the greater volume of blood passes through the pulmonary capillaries in a given time, and is exposed to a greater amount of oxygen under pressure—conditions which slightly favor the absorption of oxygen. * * * Subsequent expirations are freer and longer, and a greater amount of carbonic acid is given out, thus increasing pulmonary ventilation. Masses of desiccated secretion, designated epithelium, etc., are mechanically dislodged and their expulsion by cough is facilitated, so that at first, cough is increased. It is afterward lessened by correction of the conditions producing it. In the light of our present knowledge of anti-intoxications, the cleansing of the lungs from these decomposing masses of effete material must be considered of no little advantage. * * * The effect, clinically, is to vastly stimulate and increase the nutrition of the patient. By careful observation I have been led to attribute this increase of nutrition to the ease with which the patient is able to dispose of the greater amount of nutriment which we administer. A patient overfed, but not taking inhalations of compressed air, will not increase so rapidly in weight as one who is overfed and at the same time taking these inhalations. A patient taking inhalations of compressed air, and not overfed, will not increase in weight. I have thought that the great gain was due to the stimulation afforded to the secondary assimulation and to the general metabolism. Tissue reparation and the activity of the chylopoietic processes are increased by the increased activity of circulation, the heightened blood pressure, the augmented pulmonary gaseous exchange, and also by pressure transmitted from the diaphragm upon the abdominal organs. Patients with pulmonary troubles who are taking iron will take larger quantities and bear it better. This is also the case in anæmia and chlorosis. One of the earliest manifestations of improvement is promotion of sleep, due partly to relief of cough and improvement of respiration; partly, perhaps, to improvement of metabolic processes and consequent elaboration of physiological hypnotics. There is also an obvious gain afforded by the exercise of the chest muscles, to which a portion of the augmentation in vital capacity must be attributed.

To a very limited extent this is the effect of Weigert's hot air inhalations, only that their action is a reversal from an inhalation of compressed to rarified air to an inhalation of rarified air (rarified by heat) into the common atmosphere (compressed air, as compared with the inhaled air). The only good we can see in Weigert's method is the use of *warm* air, and this is a decided gain. We know that the inhalation of warmed vapor of ether is less likely to produce catarrhal troubles of the air passages than cold vapor. The danger of a forced inhalation of *cold*, compressed air is certainly not slight, and the insertion of a metallic tube, kept hot with an alcohol lamp or gas flame in the course of the passage of the air from the apparatus to the lung, offers no difficulty. This addition makes Solis Cohen's apparatus a perfect instrument.

Now to return to our opening paragraph. The *London Lancet*, as we said, published a laudatory article regarding the efficacy of Weigert's method September 14th; this article we were so unfortunate to have copied in the pages of THE CLINIC, though we knew better. The Deutsche Medicinische Wochenschrift of July 4th found its way to our table the latter part of July, and in it is published an investigation by Drs. N. Mosso and A. Rondelli, under the auspices of Prof. C. Bossolo, director of the Medical Clinic of the University of Turin, upon inhalation of air heated to 200° by the apparatus of Dr. Weigert. The authors, by physical and physiological experimentation, come to the following conclusion:

> Almost all the heat inhaled with Weigert's apparatus is used up in the formation of steam (vapor?) in the upper air passages, and contrary to the statement of Weigert that the air exhaled, yet registers 45 deg. R., it is a fact that the temperature in the air passages near the bronchi is a half degree less than in the rectum; the heated air, therefore, does not enter the trachea, but loses its temperature before it passes the larynx. The amount of water exhaled with the air is less and the amount of air inhaled in a given time is less.

It will be seen that but for the mechanical effects, the inspirations are longer, of the varified air, and the benefit of the exclusion of cold air, too rapidly inhaled, Weigert's apparatus joins the army of exploded theories. That the lynx-eyed *London Lancet* should have entirely overlooked this important paper of the Italian investigators up to its issue of December 14th seems remarkable. Our readers will excuse our pride, when we point to these lines as being the first in print showing the fallacy of Weigert's plan, and at the same time we congratulate the profession and the suffering public upon the fact that Weigert's idea, coupled with that of our own Solis Cohen, has brought the triumph over phthisis by the inhalation method a great deal nearer. In a subsequent issue of THE OMAHA CLINIC we will give our own observations and experiments upon this subject, in the hope that we will succeed in adding still another step in the direction of a final cure of this most deadly of all human ailments.

NATIONAL VICES AND MEDICAL RESPONSIBILITY.

Commenting upon the recent charges of the Archbishop of Canterbury, the consideration of the church's duty in repect of the two great national sins, intemperance and impurity, the London *Lancet*, of November 2d, says editorially:

> We, as medical men, certainly have tremendous responsibilities in regard to the prevalence of both sins. We see every day the consequence of them; often we are consulted about them by those who are in a state to receive not only medical but moral and friendly advice, and woe betide the physician or surgeon who fails in his duty at such supreme moments of opportunity. The medical man who minifies vice in a patient, or who seems to sanction it, prostitutes his office and misleads his patient. He is like a pilot who takes his ship into a tempestuous sea when he might have chosen still waters. We have lately quoted the opinions of Sir James Paget and Dr. Gowers as to the safety of chastity, and the physician's duty in regard to all breaches of it, actual or proposed. Their deliverances are practically unchallenged. If there are other and opposing voices in the profession they are ashamed to speak out.
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> The vice of intemperance was discussed with great care by the Archbishop. He spoke with much caution on legislative enactments for its abatement. One of the best things the Archbishop said was that to make a political contest out of such a question would be bad both for politics and morals. It is one of the evils of our present constitutional system that such an urgent question cannot be discussed apart from political grounds and tactics. He quoted the saying of the Lord Chief Justice, that scarcely a crime came before him which was not directly or indirectly caused by strong drink. The Primate saw nothing inconsistent with this in admitting that the criminal had rarely had a good start; he inherits too often a vicious constitution, and is born into a criminal atmosphere. Apart from the intemperance that leads to crime, there is the great mass of intemperance that leads to poverty, and a less degree still that leads to various forms of ill-health. The responsibility of the medical profession is perhaps greater here than in the

case of the first vice we have noticed. Undoubtedly some medical men too lightly prescribe alcoholic stimulants for their patients. And it is equally certain that the prescription is used as an excuse for taking the stimulants long after the necessity for them has passed away, and when all other parts of the physicians prescription have ceased to be remembered or regarded. Further, it is only fair to medical men to say that the most distinguished members of the profession have given a new meaning to intemperance, and have shown that quantities which a few years ago were considered moderate are fruitful sources of ailment and even of disease, and that the leaders of the profession at least are conspicuous for their moderation. Still, we cannot fail to see that by our prescriptions and by our example we may mightily help or hinder improvement in the national habits in this respect. We are probably the most gouty nation under the sun, and for nineteen centuries, at least, we have been drinking freely. It is time to reconsider our habits. A little more sobriety will certainly not be inconsistent with our national virtues, and it will immensely reduce poverty, misery and disease. The clergy are siding most creditably with the promoters of temperance. So should medical men, not intemperately, but by caution in prescription, the condemnation of all casual drinking without food, and by the utmost care in personal habits.

This comment of the London *Lancet* is very seasonable and applicable to the profession of Nebraska, with a few modifications, however. Nebraska people are not *topers*, neither are we *gouty*, and as compared with English people, from the standpoint of the *Lancet*, would be considered very temperate and in no need of admonition or legislation. Yet we, as a people, and this seems rather queer, when we remember that the cognomen "wild and woolly West" is still applied to us by our English cousins and even by our Yankee brothers, take a decidedly advanced position upon this subject, the one so fitly taken by Harley, of England: *that even small potations often repeated are objectionable and often dangerous*; with this proviso, that in certain diseases and the infirmities of old age, alcoholics may be very desirable and often indispensable. Going beyond this is certainly inexcusable and points at an erratic mental make up, with which experience lives at variance and with which scientific medicine has no concern. That the profession of Nebraska will take such a broad view of the subject which must be settled by our people, one way or another, next November, we have not the smallest doubt. Whether the profession will be the one, and no one can doubt our right and fitness to furnish the necessary information upon this subject, will depend greatly upon our sense of obligation to citizens and state. We certainly concur with the Archbishop and the London *Lancet* that ours is the responsibility.

MISSOURI VALLEY MEDICAL SOCIETY.

The Medical Society of the Missouri Valley held its fifth meeting at Sioux City, Ia., December 19 and 20, 1889.

Forty (40) physicians were in attendance. Thirty (30) new members were admitted, raising the membership of the society to one hundred and sixty-three (163), a very creditable showing for a society that was organized but fifteen months ago.

Nine papers were read and discussed. The papers were interesting and instructive, eliciting much spirited discussion, all showing the deep interest which the members are taking in medical literary work and in the welfare and prosperity of this new society.

We are strong in the belief that this society is destined to become one of the most prominent of its kind in the west, both in numbers and in work that will surely be accomplished by the many earnest thinkers and workers found among its members.

There are many bright, intelligent, industrious and finely educated young men in the ranks of our profession, who are studious, zealous in their work and ambitious to occupy a high position of honor among their fellow men. Every possible encouragement should be given to such as these, who are desirous of being something more than a common, plodding dispenser of pills and plasters, never to be heard of beyond the township in which they live.

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We should be liberal in bestowal of praise wherever it is deserved. Better overdo it, and lay ourselves open to the charge of "fulsome flattery" and "mutual admiration" than the contrary. On the other hand, we should be chary in our criticisms, avoiding as far as possible wounding the feelings and sensibilities of our associates.

When one has done the best that he can according to the light that is in him, show him that his efforts are fully appreciated, and encourage to greater endeavors to reach the ideal standard.

Harsh, carping criticisms tinctured with contempt, ridicule or malice, should have no place whatever in our new society. They are like poisoned arrows, potent to paralyze or destroy what in the course of time by careful training might attain excellence. The shafts of irony should be forever sheathed in our society. Do not be afraid of thinking, writing or talking too much in the beginning. Time and experienee will prune down, lop off, the exuberant growth, the mental water sprouts, and lead to a more perfect and pleasing style. Remember that the man who writes, reads and talks too much is in the better way to reach perfection than the one who can do these things indifferently or not at all. The one style can be modified and toned down, the other can be forced up with greater difficulty. A most excellent motto for every young man to keep before him and to serve as an incentive to higher endeavor are the words spoken by Robert Colyer, "Do the best you can according to the light that is in you."

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The Medical Society of the Missouri Valley possesses a stong, true friend and ally in THE OMAHA CLINIC. This journal publishes the proceedings of the society and all the papers read at its meetings. In this way we reach an audience of 3,500 physicians each month. The benefit we derive from this source is incalculable. We constantly hear on all sides of instances illustrating the far-reaching influence of our journal and the power it possesses of bringing together the profession of this section of the country, cementing fraternal ties, extending acquaintances, and in a hundred ways promoting the best interests of the society and its individual members. Give it that warm, hearty support which it deserves and in this way you may best further your own interests.

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Our society meets at St. Joseph, Mo., March 20, 1890. We are glad that the society selected St. Joseph as a place of meeting, but regret that they did not hold off until September, the time of our annual meeting, which in the nature of things as regards time, season of the year, election, etc., is more largely attended and altogether more successful than the meetings held in March. However, let us make a strong pull and a long pull altogether for a grand rally at St. Joseph. With the large accessions of good men to our ranks, sure to be made from the new territory into which we are going, we ought to have a good attendance and a number of most excellent papers.

St. Joseph physicians are interesting themselves in this matter, and are doing some hard and effective work, which is bound to boom the society in a way most gratifying to its friends. Without doubt, at least fifty new men will come into the fold.

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We are enthusiastic in this work and would fire every one with the same spirit. Let us be alert, aggressive, invading new territory until we have taken in the entire Missouri River Valley and contiguous territory, nor stop until we have become one of the largest, most influential, and best societies in the country. Why should not this dream be realized? We are located midway of the continent and have an unlimited field to work in. It is a possibility. Let us be up and doing, working to this great end. JAMES CARTER, M. D.

FADS.

A FAD is a trivial fancy adopted and pursued for a time with irrational zeal; a matter of no importance, or an important matter imperfectly understood, taken up, and urged with more zeal than sense; a temporary hobby.—[*Century Dictionary.*]

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THERE are *fashions* and *fads* as well in the field of medicine as in other departments of man's work. A new discovery in pathology, the finding of a new germ, a new remedy, a new name for a disease, emanating from some high authority, may be given to the medical world, and, lo, it becomes the fad of the hour. Like a new style of hat, cut of pants or dress, or whimsical notion, the new thing becomes all the rage, and physicians the world over vie with each other in their slavish devotion to the new theoretical wrinkle. It is a most remarkable and unexplainable fact, that doctors, who are supposed to be cultured, educated, level-headed and well-balanced men as a class, should be swayed and controlled by a popular notion, however senseless, just as the weaker sex is moved by a new bonnet, however high or low, small or large and ugly it may be. But the truth demands this most lamentable confession. And as time goes on there seems to be no improvement from past experiences. We shall hope for better things in the future, and shall continue to work to this end by constant exposure of weaknesses, and urging on to a higher standard of judgment based upon accurate observation and sound logic.

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The latest *fad* is "*La Grippe*," a senseless, misleading term, without any reason or just grounds whatever for its employment. It is taken up by the secular press, heralded all over the country, and is in the mouths of every man, woman and child. Instead of the ordinary salutations, such as "How d' do?" "It's cold?" "It's warm?" "Goin' to rain?" "Goin' to snow?" etc., etc., we hear from all sides the nerve-irritating, brain-distracting, soul-harrowing inquiry, "Have you the grip?" or "How's the grip?" until we feel very much like consigning the animated interrogation point who greets us thus to condign punishment in the torrid regions beyond the river Styx.

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"*La Grippe*" is a foreign dialect term, with an application somewhat similar to the English term "break-bone fever." In the first place we are opposed on general principles to the use of foreign words to express ideas in English. Secondly, the above term does not apply to the present epidemic in the United States.

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This epidemic is quite universal, affecting all classes, ages and both sexes alike. It is not an influenza or epidemic catarrh. It is essentially different from these diseases. Its prominent symptoms are headache, severe muscular pains, malaise, rigors, fever, loss of appetite, furred tongue, not much disturbance of circulation, finally terminating in sweating, often very profuse, following which, the headache, pains, weariness and febrile symptoms gradually subside, so that in a majority of cases the patient is in a comparatively comfortable condition at the end of twenty-four hours. For a number of days the patient is weak, languid, indiposed to exertion, with anorexia, and a tendency to perspire easily. Occasionally there are slight returns of fever, headache and muscular pains. In some cases there are other symptoms complicating the case. In a limited number of cases, there is cartarrhal inflammation of the air passages, in others, gastro-intestinal irritation, etc.

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The treatment which we have found most efficacious is the following: In the first stage give one or two, ten grain doses of antipyrin, subsequently give daily full doses of quinine. Antipyrine acts in these cases like magic, relieving almost completely the severe headache, pains, etc., within ten or twenty minutes, followed at once by sleep. The next best remedy to be given in the first stages is salicylate of soda in full doses, exhibited as in rheumatism. Others use quinine and opiates, some combining with these remedies saline diuretics and diaphoretics. Little or no danger is to be apprehended from the disease. A vast majority of those affected are over the worst within twenty-four hours, and only a few are confined to the house beyond two or three days. JAMES CARTER, M. D.

DIPHTHERIA AGAIN.

Up to date, no reports have been received by us on the use of iodide of sodium in diphtheria, so favorably recommended in a late issue of the CLINIC, by Dr. Sanders, of Grand Island. If any of our readers have had any practical experience with it, we would be pleased to hear from them.

At the meeting of the M. V. M. A., at Evansville, Ind., last September, Dr. William C. Wile, editor of the *New England Medical Monthly*, Danbury, Conn., brought forward a remedy for local application that seemed of great utility. In the *Medical Mirror*, of St. Louis, January issue, we find an article from Dr. Wile in which he sets forth the fact that, he has a record of nearly three hundred cases which have occurred in his own practice and that of others, which shows a mortality of only one per cent. The treatment he lays down as followed in these cases was: "The internal administration of one twenty-fourth of a grain of bichloride of mercury every two hours, and the application of *sulpho-calcine* to the patch or patches, thereby dissolving them." Later experience has taught him that the sulpho-calcine should be applied pure every half hour. In most cases the membrane will dissolve in twenty-four hours.

Dr. Dixon, of Henderson, Ky., has used the remedy since last July, with marked success. His formula is, equal parts of sulpho-calcine, glycerine and water, painted on or sprayed on, every two hours. In twenty-eight cases only one death occurred. In eight there were nasal, and in three laryngeal, complications.

Dr. I. N. Love, founder and editor of the *Mirror*, also gives his testimony in favor of this remedy. In one case especially, aged two and a half years, he thinks death would certainly have resulted had there not been a vigorous use of the sulpho-calcine diluted one part to three in water. In addition to the bichloride of mercury, Dr. Love has great faith in benzoate of soda in ten grain doses every hour.

The sulpho-calcine may be had of the Goodman Drug Co., and perhaps other druggists also, in this city, and we hope to hear of its being tried. Let us not be satisfied till diphtheria can be classed among the diseases easily preventable and manageable.

IN A discussion of the signs of the moribund condition, Dr. John Shrady, of New York, *Medical Record*, January 8, 1889, page 626, lays particular stress on the up-and-down movement of the pomum Adami, which, when persistent, he has come to regard as the most ominous sign of impending dissolution. When this sign has appeared in a case of diphtheritic croup, neither intubation nor tracheotomy will avail. He also points out its diagnostic value in discriminating between alcoholic coma and that of compression of the brain by fracture or blood-clot. In cases of phthisis, he has noted the appearance of this sign even a fortnight or longer before dissolution. Its usual time of appearance is coincident with the period of tracheal rales.—*Cleveland Med. Gazette.*

Correspondence.

TWO CASES OF POISONING WITH "PISO'S CONSUMPTION CURE."

Editor Clinic:

Believing it to be the duty of the profession to expose the dangerous character of patent medicines, I take pleasure in reporting the two following cases.

About two months ago, Ethel B., aged two and one-half years, accidentally got hold of a bottle of the above medicine and took several swallows. The family did not discover what she had done until she showed symptoms of becoming stupid and drowsy. I was called in and saw at once that she was suffering from an overdose of an opiate. At once gave her an emetic of Turpeth mineral and ipecac. This was followed with belladonna, digitalis, nux vomica, and aromatic spirits of ammonia. Kept her walking about until the pupils dilated and the tenth nerve reacted. In several hours she was out of danger.

Last Monday evening was called to see Mrs. P. Her sister at once said "she thought she had taken too much cough medicine." Upon examination found her almost unconscious from the effects of an opiate.

She had taken large and oft repeated doses of the cough medicine during the day, until her system was thoroughly under the influence of opium. At once gave her a hypodermic injection of atropia, strychnia, and digitalin; internally gave her large doses of aromatic spirits of ammonia and strong coffee. In one hour she was much better and was soon out of danger. Gave her one dose of belladonna tincture.

While this is but a brief sketch of opium poisoning by overdoses of Piso's Consumption Cure, it shows that danger lies in ambush by using this much vaunted patent nostrum.

It would be interesting to know what success, if any, your readers have had with electricity in severe cases of opium poisoning. Several months ago a case was reported in the *Therapeutic Gazette*, in which this agent was used with success after all other remedies had failed. I then reported a case I had several years ago with like success. I am positive the patient would have died but for the electricity. I applied one pole over diaphragm and the other at the side of the neck; the result was instantaneous.

L. R. MARKLEY, M. D., Kimball, Neb.

PRACTICAL POINTS IN THE ADMINISTRATION OF ETHER.

Dr. George F. Shrady, in *Medical Record*, February 23d, 1889, concludes a paper on this subject as follows:

1. In commencing the administration of ether the gradual method is to be preferred.
2. Its employment allows the lungs to empty themselves of residual air, prevents coughing and struggling, and places the organs in the best possible condition to receive and rapidly utilize the ether vapor.
3. After the stage of primary anæsthesia is reached the more pure ether vapor the patient breathes the better.
4. The shorter the time of anæsthesia, and the smaller the amount of ether used, the less likely are the unpleasant sequelæ to occur.
5. The more evenly it is administered the less shock to the patient.
6. Anæsthesia should be entrusted to experienced administrators only.
7. Many of the fashionable efforts to resuscitate patients are not only useless, but harmful.
8. The minimum amount of force should be employed to restrain the muscular movements of the patient.
9. Mixed narcosis is often advisable for prolonged operations.
10. The utility of the galvanic battery, in threatened death, is yet to be proven.
11. The most trustworthy means of resuscitating desperate cases are artificial respiration, hypodermic stimulation, inhalation of nitrate of amyl, and inversion of the body.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,

208 So. Fifteenth Street, Omaha, Neb.

Reviews.

A HAND BOOK OF DERMATOLOGY; For the Use of Students. By A. H. Ohmann-Dumesnil, A. M., M. D., Professor of Dermatology St. Louis College of Physicians and Surgeons, etc. St. Louis Medical and Surgical Journal Publishing Co (Price not given).

This is a little book 7¾x4½ inches, of 167 pages, with 34 illustrations. As the author states in the preface, it is a short resume of lectures delivered in the St. Louis College of Physicians and Surgeons. The diagnosis of skin diseases is often difficult for the student, and for old practitioners, for that matter. This little book contains *multum in parvo*, and is commended as a valuable ready-reference pocket companion.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX; A Work of Reference for Medical Practitioners. Edited by P. W. Williams, M. D., secretary of staff, assisted by thirty seven distinguished collaborators widely known in Europe and America. Morocco cloth, 8x9, 600 pages, illustrated. Published by E. B. Treat, No. 5 Cooper Union, New York. Price, $2.75.

The eighth yearly issue of this annual (for 1890) is announced for early delivery. The prospectus gives promise of excellencies surpassing all former editions. Its editors in the several departments are to give a summary of new remedies alphabetically arranged, also a resume of new treatment in dictionary form; with references to the medical literature of the world pertaining to the year's progress of medicine. The volume combines the features of an annual retrospect with those of a medical encyclopædia, each article being written by a physician or surgeon who can speak with authority on the subject treated, the whole comprising a remarkably full resume of the medical progress of the year. It occupies an *unique* position in medical literature, and its place cannot be supplied by any other work. After a somewhat careful examination of the seventh volume (1889) we do not hesitate to recommend it as an excellent compilation. It is wonderfully satisfactory to have the cream of the medical journals for a year laid on your table in a convenient, handy form for reference for the insignificant sum of $2.75.

THE PHYSICIANS VISITING LIST 1890. By P. Blakiston Son & Co. Thirty-ninth year, with list of new remedies, dose table, etc.

It maintains its position as a valuable companion to the general practitioner.

LITERARY NOTE.

THE NATIONAL MAGAZINE for January announces two new and valuable departments—"Biblical Literature" and "Pedagogy"—with Rev. J. C. Quinn, Ph.D., and J. S. Mills, A.M., president Western College, as editors. Agricultural readers will be especially interested in the new "Institute of Agriculture," described in this number—a part of the University Extension System of the National University of Chicago, whose non-resident or correspondence under-graduate and post-graduate courses have met with such favor. Other articles are by Prof. E. A. Birge, of the University of Wisconsin, and eminent specialists. Published at 147 Throop street, Chicago, Ill. Subscription, $1.00 per year. Sample copy, 10 cents.

THE CENTURY DICTIONARY.

Received from Van Husen & Chapman, General Agents for Iowa, Nebraska and South Dakota, Sioux City, Iowa, the prospectus of the Century Dictionary, an Encyclopedic Lexicon of the English Language, prepared under the supervision of William Dwight Whitney, Ph. D., LL. D., Professor of Comparative Philology and Sanskrit in Yale University. Published by the Century Company, New York.

The Century Dictionary is indispensable not only to every student of English but to all students of the modern and ancient languages. It is, first of all, a very comprehensive and elaborate dictionary of English, constructed from both a scientific and a practical point of view. It treats the language historically, beginning with the so-called Middle English period, about the year 1200; it gives all the important words and forms existing at that date, and increases in fullness with the development of the language until the present time, comprising in all a vocabulary of about 200,000 words; it gives the etymological history of these words and displays the whole structure of the language with great fullness; and it devotes much space to an original and careful analysis of meanings. The spoken as well as the written language is included in it,—that is, it contains all important provincial, dialectal, and local words and forms which have existed in the different sections of the English speaking world. Special attention is given to the fundamental or stock words of the language (such as *be, bear, do, come, go, fall, run, good, bad, full*) and to relations of words, articles, pronouns, pronominal adjectives, prepositions, conjunctions, etc., with the aim of displaying their complicated etymological and grammatical relations and their idiomatic uses, and also to idiomatic, technical, or otherwise notable phrases, absolute and current. Of these phrases not less than 30,000 are defined.

To obtain materials for this history and analysis of the language the entire field of English literature, old and recent, classical, popular and technical, has been carefully examined; and the matter thus accumulated has been liberally used in the form of quotations (with exact references to sources) in illustrating the facts recorded. The collection of extracts thus given from the older English writers, and particularly from Elizabethian authors, is especially noteworthy.

The etymologies are particularly elaborate, and have been so constructed that they are of great practical value, not only to the special student of English but also to the student of any language which is nearly or remotely related to or has come in contact with English. In fact, the etymologies contain a history not only of English words (fuller in most cases than in even the largest of the exclusively etymological dictionaries hitherto published), but also of all the principal words in the chief Indo-European tongues: Anglo-Saxon, Friesic, German, Danish, Swedish, Icelandic, French, Spanish, Portuguese, Italian, Latin, Greek, etc. Classical students, for example, will find here, usually in the same alphabetical order as in Latin and Greek, almost the entire Latin and Greek vocabulary, with the etymology in detail and the relations of the words to Sanskrit, etc., on one hand and to English, etc., on the other, precisely indicated.

The Work Already Done in the Direction of Standardizing Fluid Preparations.—(*Medical Age*, Nov. 25, 1889)—The first and most notable advance made in the direction of supplying standardized preparations not open to the dangers of the existing pharmacopœial processes for fluid extracts, was by Messrs. Parke, Davis & Co., who introduced in 1883, a class of assayed preparations which were entitled Normal Liquids. The standard decided upon for these liquids was the result of long experience in the collection, purchase, examination and analysis of crude drugs with a determination of the amount and character of their active principles. The reliability of normal liquids soon led to their large consumption, and the medical profession have evinced their preference for them to such an extent as to make them now an established and popular method of exhibiting the toxic and narcotic drugs.

Normal liquids may be defined to be concentrated tinctures, the methods of manufacture of which serve as models for imitation. They represent more closely than fluid extracts made by the present pharmacopœial methods the average standard strength of crude drugs. The simplest explanation of their nature would probably be to regard them as fluid extracts adjusted by assay to a fixed standard of strength which make them absolutely uniform in composition and therapeutic action.

The favor with which normal liquids, and assayed products generally, have been received by representative men of the medical profession, has led us to believe that the best interests of pharmacy will not be served unless these or like preparations are officially recognized. For concentrated tinctures of a definite strength, the name "normal liquids" appears to be happily chosen, as it implies a definite standard of strength. The list should embrace preparations of the more potent crude drugs, 1 Ccm. representing 1 gramme of drug of standard strength.

It does not seem to us from a careful review of all efforts made in this direction that any have met with equal acceptance, or merit as much appreciation. Whatever may prove to be the decision of the committee as to making such assayed preparations official, there can never be any question as to whom the honor of their actual practical introduction is due.

As the time approaches when the revision is to take place (and in the minds of thinking men the standardization of fluid extracts is now an accepted fact), there will no doubt be many competitors for this honor who may claim by reason of a mushroom-like growth in the field of this new departure, official recognition for scientific work.

It will be necessary on the part of the Committee of Revision, therefore, to carefully investigate the claims in this direction, and when awarding the credit for such work to see that they do not place the laurels upon the wrong brow.

Unsupported and disinterested scientific labor, no matter from what source, should always be welcomed with the endorsement of scientific men, and we sincerely trust that the efforts made in this direction by those deserving it, will receive full appreciation at the hands of the compilers of the forthcoming Pharmacopœia.

Publishers' Page.

The Empire Elastic Bandage is specially adapted for varicose veins and surgical uses, is elastic porous, and absorbent, and the finest bandage now on the market.

"Its elasticity, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, is a feature unknown to any other bandage."

"The only bandage that is superior to the elastic stocking for varicose veins."

Bromidia.—I have used the Bromidia (Battle), and the results obtained have been really excellent. It certainly combines all the advantages of other preparations of this nature, while at the same time it possesses none of their disadvantages. The fact that it produces no unpleasant sensation on awaking, renders it specially valuable. Dr. Lud. Marc,

St. Nazaire-sur-Loire, France.

Salix Nigra.—This remedy has been used with much success as a sexual sedative in the treatment of masturbation, excessive venery, spermatorrhœa and ovarian disease. As a sexual sedative the fluid extract of the buds is considered the most efficient. Dose, ¼ to 1 fluidrachm, not miscible with water. As a general tonic and antiperiodic the fluid extract of the bark is employed with advantage. Parke, Davis & Co. make both these extracts and will mail to the medical profession on demand working bulletin giving botanical description, medical activity, use, and notes of cases.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. Messrs. R. A. Robinson & Co., to whose advertisement (on page xx) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

EMPIRE ABDOMINAL SUPPORT.

The Empire Abdominal Supporter is the best and cheapest supporter on earth. Specially adapted for all cases of pregnancy, corpulency, tumors, or all other cases of enlargement of the abdomen. For prices see large full-page advertisement in this journal.

Kansas City, Mo., Oct. 28, 1889.—Chas. Chadwick, Ottis R. Wyeth, Louis A. Schoen, Geo J. Schoen, Chas. F. Herrmann, Geo. Eyssell and Horace L. Roy, druggists of this city, were brought before Judge Worthen to-day, and each fined $500 and costs for counterfeiting a trademark preparation, known as BROMIDIA.

Pepsin is undoubtedly one of the most valuable digestive agents of our materia medica, *provided a good article is used.* Robinson's Lime Juice and Pepsin, (see advertisement, page xx, this number) we can recommend as such.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin on the American market, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

The Mellier Drug Co. sell Obstetrical Satchels, fair or black leather, 17 inch, $4.25; 16 inch, $4.00; 14 inch, $3.50; 12 inch, $3.00.

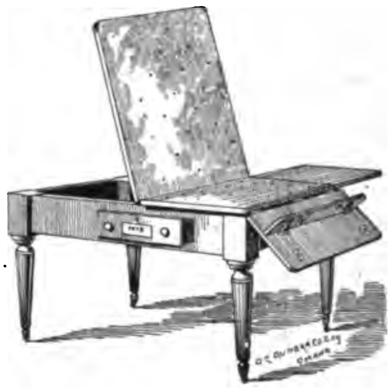
Wanted—A position as an assistant or partner with a good physician, in a good town, who wishes to give up a part of his practice to a young man who graduated with highest honors of his class last spring. Address, A. C. A., Lock Box 64, Oxford, Neb.

Offensive Odor of the Breath, due to bad teeth or other causes, may be overcome, or at least greatly abated, by the habitual use of Listerine. Add a teaspoonful to a tumblerful of water for a mouth-wash and gargle, and if a little is swallowed, so much the better. Indeed, a bad breath is not unfrequently caused by the gaseous eructations of indigestion, and for this also Listerine is an excellent remedy, in doses of twenty to thirty drops in a little water.—*Sanitarian.*

For Sale.—A practice in eastern Oregon for $1500, doing a yearly business of $4,000, collecting $3,000. Good reasons for selling. Address, M. Dittebrandt, M.D., Elgin, Oregon.

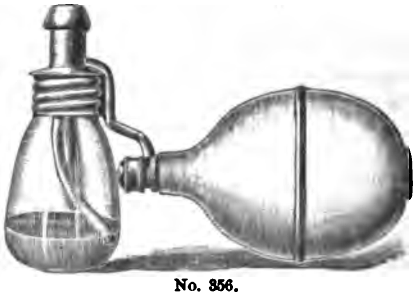
For Sale.—A general practice in a good growing town. Address, "H," Lock Box 85, Independence, Kansas.

RICKEY OPERATING TABLE.



Is suitable for all conceivable operations in surgery or gynæcology, and may be used as an oculist's chair. The table is 5 feet 8 inches long, and 26 to 28 inches wide; height, 2 feet 8 inches. Has movable casters; drawers with locks, for surgical instruments; also a roomy receptacle for splints, sponges, etc. Upholstered in broadcloth and finished in good style. Can be placed in a great variety of positions, from a full length table to a chair. Made of walnut or oak. Legs screwed in. Leaves made to remove at will. Price, hard wood, $35. For sale by Goodman Drug Co.

VASELINE ATOMIZER



No. 356.

For using Vaseline or Petrolatum Oil, for Nasal or Throat troubles, there is no better instrument than the above. Price, $1.50 each. Goodman Drug Co. have them in stock.

THE OMAHA CLINIC.

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DEVOTED TO THE MEDICAL PROFESSION OF THE WEST.

VOL. II. OMAHA, FEBRUARY, 1890. No. 11

*CASES OF PARAMETRITIS AND PERIMETRITIS.

By EDWARD HORNIBROOK, M. D., Cherokee, Ia.

It is not my intention to detail cases as they are seen by the surgeon or the gynecologist, but to present a condensed record of a few cases, seen by me, as family physician or in consultation. Neither is it my intention to present composite photographs, such as can be found in all standard works on women's diseases, but rather to describe the special characteristics of each case as I have observed them at the bedside.

A young gentleman who had just graduated from a reputable medical school, and thought himself well-read in the text-books, applied to me for the position of assistant. He thought these qualifications should command a salary which I thought exorbitant for a man with no experience. I asked him if he thought he would recognize the individual members by looking at a composite photograph of a whole class?

From his teachers and text-books he had only learned the class characteristics of diseases, and he needed practice and observation, to enable him to diagnose the individuals of each class before the golden opportunity of treatment had passed.

There is no disease in which early diagnosis and efficient treatment is of greater importance than inflammation of the pelvic cellular tissue or pelvic peritoneum; nor is there any disease in which neglect of early and thorough treatment entails such a long list of serious secondary sequences. Pelvic abscess and periuterine hyperplasia, hydro and pyo-salpinx, retro and anteflexion, sterility and dysmenorrhea, chronic ovaritis and ovaralgia, with their long list of attendant neuroses, could often be prevented by proper treatment of the precursory inflammation. Years of suffering often originate from a cold taken during menstruation, from a fall or a slight accident, from an abortion or normal parturition, from the passage of a uterine sound or the application of caustic to the cervix, from a vaginal injection, or from sitting in a cold room during menstruation.

When women trace their ailments to any of these causes we almost invariably find evidence of a pre-existing pelvic cellulitis, or pelvic peritonitis, and yet the symptoms may have been so slight at first as to attract little attention. Matthew Duncan says: "I might adduce cases of gonorrheal ovaritis, commencing in healthy girls and ending in the fusion of all the parts in the pelvis into a solid; immovable mass without the patient losing a cheerful and even gay visage, or making any great complaint of pain unless interrogated closely, and then alleging the chief suffering to be from irritable bladder." The symptoms may, on the other hand, be very severe at first, especially if the peritoneum is invaded, and terminate in resolution, if not over-looked or neglected, without any impairment of physical health or reproductive functions.

CASE 1.—Mrs. G., aet. 23. German, fleshy, flaxen-haired, always healthy. Second child born April 5th, 1862. Attended by mid-wife, labor easy and normal. Had a chill on the third day, followed by fever, headache and suppression of milk and lochia. Sent for me April 10th. Pulse 100, full and bounding, body bathed in perspiration, (the clinical thermometer was not then in use) vagina hot and tender. Enlargement the size of closed hand in right iliac region, tender to abdominal and vaginal palpation, but not painful. Bled her freely and prescribed calomel, opium and tartar emetic, which were the standard anti-phlogistics of that period. (Emmet had not then demonstrated the efficacy of the hot vaginal douche.) In five days slight ptyalism was induced and enlargement in the iliac region had subsided, but there was a swelling projecting under Poupart's ligament as large as an orange. To this swelling six leeches were applied, followed by a poultice, and minute doses of calomel were given to keep up the mercurial action. The swelling subsided and she recovered fully in a month. I attended her in four subsequent confinements and there was nothing to indicate that any trace of the severe cellulitis had been left.

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*Read before the Medical Society of the Missouri Valley, at Sioux City, Ia., December 19, 1889.

CASE 2.—Mrs. H., Scotch, aet., 21. A blonde, large and fleshy. First child born January 3d, 1863. Mid-wife in attendance. Labor normal. Chill on fifth day. I was sent for and reached the bedside twelve hours after chill. Pulse quick and hard, skin dry, dorsal decubitus, knees drawn up, hypogastrium exquisitely tender and painful, intense thirst, and vomiting incessantly. Bled her freely and prescribed calomel and opium, hot fomentations to abdomen. There was well-marked induration and tenderness in the left iliac region, skin moist, pulse full and soft, vomiting had ceased. Twelve leeches were applied followed by poultice, calomel and opium, to be continued until ptyalism was induced. She had fully recovered in three weeks and bore several children subsequently.

CASE 3.—Miss S., aet. 20. Fell from a horse July 4th, 1864. Some pain in pelvic region followed, but she was not ill till July 10th, when she had a rigor followed by headache, vomiting and severe abdominal pain.. Saw her July 12th; pulse wiry, face flushed knees drawn up; hypogastrium swollen and tender; a moderate metrorrhagia had supervened on the previous day. Vagina hot and tender, uterus immovable. Induration could be felt on right side of cervix, vaginal vault broad. Bled her freely and prescribed calomel and opium and hot fomentations to abdomen. She entirely recovered in three weeks, married within a year and bore several children. I had to apply forceps to the first child, but she made an excellent recovery.

I have ventured to present these cases, not because I thought them rare or uncommon, but because they show the treatment which was in vogue more than a quarter of a century ago. Does our modern treatment show any better results? We have discarded the lancet and almost abandoned the use of calomel, but have our patients benefited by the change? My associates know that I am not in the habit of glorifying the past or discrediting the present. Some of you will remember how severely I have been criticised for extolling modern anti-pyretics and decrying the old anti-phlogistics.

In making selection of a few cases for this paper I was struck with the better results, immediate and remote, which I had obtained in all inflammations of serous membranes before I had discarded the lancet or almost abandoned the use of calomel for its constitutional effect. In the year 1859 I was permitted to be present at a consultation of three of the most eminent physicians in Toronto. The patient, who had been confined three days previous, was cold and almost pulseless. The late Dr. Rolph, then nearly seventy years of age, contended that she was suffering from the shock of commencing peritonitis. They bled her freely and she rallied immediately. Which of us would have the temerity to advise such a course, bearing in mind the tenets now generally accepted by the profession? In the same year Drs. Parker and Howett, of Guelph, salivated a patient who had a recently healed wound and the cicatrix was absorbed. We hear nothing now of calomel as a stimulator of the absorbents or of its effects in preventing the organizations of fibrin, and yet my records would seem to show that the cases of perimetrites treated with calomel left no traces of the adhesions and indurations which give employment to the modern gynecologist. The professional opinion of to-day is represented by Oliver Wendell Holmes:

"Bleed!" says Doctor Green,
"That's downright murder! Cut his throat, you mean!
Leeches! the reptiles! Why for pity's sake
Not try an adder or a rattle snake?
Blisters! why bless you, they're against the law—
It's rank assault and battery if they draw!
Tartrate of Antimony! Shade of Luke,
Stomach's turn pale at thought of such rebuke!
The portal system! What's the man about?
Unload your nonesense! Calomel's played out!"

Notwithstanding the younger generatio of physicians are apt to think that we are ol fogies, and have been enjoying a Rip Va

Winkle sleep during the last thirty years, if we hint that phlebotomy has its uses; yet we find such men as Hartshorn, Loomis, N. S. Davis, the late Dr. Howard, of Montreal; Dr. Ristine, of Cedar Rapids, and Dr. Emmert, of Atlantic, advocating bleeding in pneumonia, and quoting statistics to prove its usefulness. We have not been asleep, we have changed with the times, but have endeavored to "prove all things and hold fast all that is good." Appearances at present indicate that those who will be in practice thirty years hence will

"find the lancet in its honored place,
Leeches and blisters rescued from disgrace,
Your drugs redeemed from fashion's passing scorn
And counted safe to give to babes unborn."

CASE 4.—Mrs. G., aet 42, came under my care October 2d, 1882. Mother of four children. Parturition easy and natural. Youngest child eight years old. One abortion six years after birth of last child. Menstruation regular and natural since abortion. Health good till one year ago, when she began to suffer from frequent and painful micturition. Under treatment by a careful and competent physician for six months. He had dilated the urethra and applied caustic to urethral ulcers several times, but no relief had followed. She is now pale, haggard, irritable; pulse 120, temperature 97½, appetite fair, bowels regular, symptoms not aggravated during menstruation. Urine passed every few minutes night and day, so that she gets no sleep. Declares she will become insane if not relieved. Urine alkaline, contains pus and blood. Uterus immovable, cervix hard. No history of a previous pelvic inflammation. Tried to examine urethra with urethral speculum, but pain was so great that I had to desist. A small soft rubber catheter was passed, and the bladder washed out with a solution of benzoic acid and borax. Ordered rest in bed, hot vaginal douches and vaginal suppositories containing morphia and belladonna, bladder irrigated daily, and prescribed tincture of cinchona and bichloride of mercury.

October 10th, can retain urine half an hour, sleeps some, more comfortable, probably from effect of vaginal suppository. Continue this treatment for three weeks longer, except bladder to be irrigated but once in three days.

November 1st, can retain her urine for two hours if she remains recumbent, but notices pain on defecation, bowels relaxed. Examination reveals induration and enlargement of vaginal vault, with tender point in front of cervix. Bimanual palpation shows that the pelvic viscera and cellular tissues form one solid mass. From this date the roof of the vagina was painted daily with tincture of iodine. The morphia and belladonna suppositories supplemented by glycerin tampons, and the vaginal douche used twice a day.

November 15th, enlargement can be felt rising from the pelvis into the left iliac region. This gradually increased till December 1st; when it reached the hypochodrium and pressed against the ribs. At this date the whole of the left side of the abdomen was filled with the enlargement.

December 3d, fluctuation was detected under the margin of the ribs. She has had no chill, but has suffered severe pain in the enlargement for last ten days. Aspiration was proposed and refused by the patient and her friends.

December 10th, suffering from cough and shortness of breath, with well-marked hectic symptoms.

December 15th, coughed up at least two quarts of offensive pus during day. Swelling softer. She continued to expectorate large quantities till the 24th, when she died, exhausted. The abdominal swelling had disappeared gradually. Post mortem refused.

Prof. Freund has described a chronic inflammation of the pelvic connective tissue, which has no acute stage. The etiology of this form, he says, "is to be found in ulcerative processes in the bladder, rectum and uturus." He calls this "parametritis chronica atrophicans circumscripta et diffusa." Whether the case I have related is a fair specimen of the cases described by Freund I leave you to judge. It is the only case I have seen or found recorded where a pelvic abscess opened through the diaphram.

CASE 5.—Mrs. S. came under my care December 4th, 1884. Has been treated three weeks by a homœopathic physician for so-called neuralgia of the ovaries. Act. 31;

always healthy, family history good; never pregnant; married a year; took cold last menstrual period, which arrested discharge second day; severe intermittent pain, like the pains of labor, came on third day; there was great thirst, frequent vomiting; headache; movement caused pain.

Present condition—Pulse, 120, hard and wiry; temperature, 100°; countenance pinched and anxious, legs drawn up, anorexia, thirst, no vomiting except when she attempts to take food; vagina hot and tender, uterus immovable; hypogastrium tender, bowels have not moved for two weeks, micturition frequent but not painful. Ordered hot fomentations to abdomen, hot vaginal douches; and gave quarter of a grain of morphia subcutaneously and had a fifth of a grain of calomel placed on her tongue every two hours, one-quarter grain of morphia every six hours, and milk and beef tea for nourishment. Next day bowels moved by a copious enema of warm water, which gave great pain. The constipation was not marked afterwards: The calomel was suspended on the tenth day; no ptyalism apparent. No other medicine except one-eighth grain morphia pills would be retained by the stomach. This treatment was continued with occasional modifications for three months. She could not be induced to take sufficient nourishment to maintain strength. Rectal alimentation was tried and had to be abandoned on account of the pain which it caused.

March 5th, 1885, detected fluctuation in Douglas' pouch. Aspirator needle introduced and about eight ounces of white, odorless pus removed. She was too weak to endure further manipulation; hoped she would rally sufficiently in a few days to warrant in making an incision and introducing drainage tube.

March 6th, free from pain, body covered in cold prespiration, almost pulseless. She died on the 7th. No post mortem permitted. Perhaps a bolder surgeon would have explored the tumefaction behind the cervix earlier. I adhered to my usual rule, to be certain of fluctuation before puncturing.

If this case teaches anything it is that the golden opportunity for treating pelvic inflammation is passed before three weeks from its commencement.

Case 6.—This case was seen in consultation with my friend Dr. Biller, who has furnished me the following description:

Mrs. G., primipara, confined Nov. 8th, 1885. Labor normal. Began to suffer pain in hypogastrium morning of third day. Saw her six hours after illness commenced. Pulse rapid, temperature 104, uterus enlarged, tender and painful. Ordered warm vaginal injection of 1 to 2000 bichloride of mercury solution every three hours, hot applications to abdomen, and morphine and quinine administered. Acute symptoms subsided in a week and she improved for a few days. I enjoined absolute rest but she disobeyed my injunctions, got out of bed and suffered a relapse. Symptoms similar to first attack. I now detected laceration of left side of cervix, and running from this laceration, an induration could be traced along the broad ligament, which was tender. The left inguinal region is also more tender than the right. The pain subsided and the temperature became normal after four week's treatment. An enlargement could now be felt on the left side, extending as high as the crest of the ilium and nearly to the median line, which was tender to the touch, and painful when she moved. Patient debilitated and stomach irritable. Regulated diet carefully and prescribed carbonate of iron and quinine. Painted the enlargement daily with tincture of iodine, warm vaginal douches given daily. She had several attacks of severe pain in the region of the enlargement, during the next few weeks, with temporary rise of temperature. Involution of the uterus was complete at the end of the ninth week, but the swelling in the left iliac region persisted. About this time Dr. Hornibrook was called in consultation. He introduced the aspirator needle from the vagina, having detected obscure fluctuation, and obtained about two drachms of watery fluid. Mercurial ointment was applied over the abdomen and tincture of iron and iodine given internally. The warm water injection was changed to hot water and increased in quantity. In about two weeks slight ptyalism was induced and the mercurial ointment omitted. Carbonate of iron and quinine were again substituted for the iron and iodine, as the latter seemed to irritate the stomach. The vaginal vault was now daily painted with tincture of iodine. This line of treatment was continued for ten or twelve weeks. The swelling gradually subsided from the time the growth was punctured, so that at the end of three months the enlargement could not be felt through the abdominal walls, but could be felt through the vagina. She had regained her strength and did her own house-work for a few weeks. She was at a party, and danced several times, on the night of July 4th. Another severe attack of pelvic inflammation followed, the temperature rising to 104. Vagina hot and tender; pelvis seemed filled with a hardened mass, cervix crowded forward under pubes, the left iliac region and the whole left side of abdomen enlarged and tender. Micturition painful. Fluctuation could be felt in the abdominal swelling on the third day, but the mass felt through the vagina remained hard. On the seventh day the tumor reached to the hypochondrium on left side, fluctuation marked. Since the commencement of this attack the bowels had been thrice moved, twice by cathartics and once by enæma. Aspiration determined upon, but before that was resorted to, on the tenth day, a watery diarrhœa set in which lasted forty-eight hours and caused the almost entire disappearance of the enlargement, except that a swelling the size of an orange, could be defined to the left of the cervix by bimanual palpation. She remained in good health till June, 1888, when she became pregnant and complained of some pain during the first months. Vaginal examination detects swelling of the same size and in the same place. She was confined at term, and the attending physician, Dr. Ballah, assures me that labor was normal in every respect. The doctor knew of her condition but was unable to detect any remains of her former trouble, either during labor or afterwards. She has remained in good health, and is again pregnant.

Case 7.—I was called August 18th, 1888, to an adjoining county to see in consultation a lady whose attendant gave the following: Aet. 28, one child five years old; no previous abortion; last menstrual period, which was scanty, six weeks ago; periods often irregular; jumped from a carriage while horse was running away three weeks after cessation of flow; slightly bruised but not seriously injured. Severe paroxysmal pain in the uterus commenced two days after the accident. Hemorrhage on third day attended with vomiting. He thought abortion threatened and prescribed morphia, but finding pain and other symptoms not relieved he suspended the morphia and ordered ergot. The symptoms, except the hemorrhage were much aggravated, but the cervix did not dilate, which he thought singular, as pains like labor pains had continued for nearly three weeks. He went for his instruments to produce mechanical dilatation. The husband objected to instrumental interference and consultation proposed. I found her pale, emaciated, the slightest movement, even raising the head from the pillow, causes vomiting or syncope; has retained nothing on her stomach for two weeks; pulse, 150; temperature, 97. Bowels have not moved since commencement of illness; bladder irritable; hypogastrium tender and swollen; pressure on cervix painful, induration could be traced from left side of cervix to margin of pelvis, where bimanual palpation outlines a swelling as large as an orange; cervix elongated; os rounded and small. My diagnosis of perimetritis was disputed by the attending physician because the temperature had been sub-normal from the first. This is a common mistake. I have been sent for three times recently to perform abdominal section for intestinal obstruction when the cases proved to be peritonitis. This had in each case been eliminated from the diagnosis as there was no rise of temperature.

The foot of the bed was raised to relieve the cerebral anæmia, and a warm water clyster ordered, which, although it caused some pain, brought away a large quantity of hardened fæces. Morphia was given hypodermically; ice to allay thirst; a teaspoonful of milk and lime water every fifteen minutes; rectal injection of cream and yolk of egg. Body to be rubbed with warm oil three times a day. Hot vaginal douches and hot fomentations to abdomen.

September 1st, strength improved. Retained milk as directed, but if the head was raised retching supervened; rectal alimentation well borne. Swelling above pubes in median line large as a cocoanut, hardened and tender line can be traced from this to swelling in inguinal region mentioned above. The skin over the latter was reddened and tender. Continue treatment and apply mercurial ointment and dry heat over abdomen.

September 18th, strength improved. Head can be raised without causing retching; stomach retains a tablespoonful of milk every half hour; rectal alimentation caused pain and had been discontinued. Urine dribbles away constantly; bladder empty; slight mercurial fœtor; swelling above pubes resembles uterus at fifth month of pregnancy; hard and tender. Swelling in inguinal region has subsided. Cervix pressed forward against pubis; no fluctuation can be detected.

September 25th, large quantities of pus escaped from the rectum during the day. A slight discharge continued several weeks, when the enlargement disappeared. The patient gradually improved, so that in May last she was able to ride out again, when another accident happened, which I have been informed has left her with paralysis of the lower extremities.

Case 8.—Mrs. E., aet. 21, came to my office April 22d, 1889. Married one month. Began to feel uneasiness in hypogastrium two weeks after marriage. Noticed enlargement of abdomen three days subsequently. No pain, but uncomfortable feeling of distension. Languid, appetite bad, tongue coated, night sweats, no chill or traumatism, coitus not painful till after illness commenced, no vesical irritation, bowels regular. Husband denies having had gonorrhœa. Pulse 104, temperature 100. Uterus movable, cervix close to pubes, sound passes two and one-half inches without pain, Douglas' pouch distended and soft. Fluctuation can be felt bimanually in an enlargement the size of a child's head, which occupies the right iliac region. Advised aspiration which she declined, saying that she had a similar enlargement three years previously, which subsided without treatment.

Heard nothing more of her for two weeks, when I was hastily summoned thirteen miles in the country. Found her with pinched features, knees drawn up, abdomen distended. Had chill after returning home two weeks previously, has been suffering pain ever since. Pulse 140, temperature 104. No urine had been passed for twenty-four hours. Two pints of offensive urine removed by catheter, enlargement could be well defined, it had not increased but had become tender and painful. Ordered morphia to relieve pain, ten minims of muriate tincture of iron and two grains of quinine every two hours. Hot vaginal douches and hot fomentations to abdomen, catheter to be used every eight hours.

Six days subsequently had chill, followed by intense pain in left lumbar region. In three days a well defined enlargement in which fluctuation could be detected, extended from crest of ilium to margin of ribs. The case now presented such well marked symptoms of septic peritonitis, both pelvic and abdominal, that I thought laparotomy the proper treatment, but the surroundings of the patient and her physical conditions were such that there was little prospect of a successful result. I thought the responsibility of refusing to follow the dictate of modern surgical teaching too great for one man to assume, and asked for a consultation. Dr. Cleaver was called and he agreed that under the circumstances we were justified in refusing to operate.

Four weeks after she had visited my office and twelve days after voluntary micturation had ceased, large quantities of pus began to pass with the urine. The bladder was irrigated with carbolized water every time the catheter was used. The swelling in the right iliac region gradually subsided, so that on the eleventh day after the pus appeared in the urine, no enlargement could be detected, and she voided the urine voluntarily. The catheter was occasionally used and the bladder irrigated for three weeks longer when the purulent discharge had entirely ceased.

The swelling in the left lumbar region increased for nearly two weeks after its commencement, when it filled half the abdomen On the fourteenth day there was a discharge of pus from the anus—quantity estimated at two quarts. The swelling subsided and disappeared in two weeks. Patient's health improved and was reported well in August.

CASE 9.—I saw another case in consultation, which appeared to have had its origin in ulcerative processes commencing in the rectum, but as I have already taken too much of your time I will only detain you with a brief summary from notes kindly furnished by her attending physician, Dr. Meyers.

Mrs. C. suffered from diarrhœa in August, 1886, with the usual symptoms of mild attack of typhoid fever. This was followed by an enlargement in the left iliac region which increased from the size of an orange when first discovered to that of a cocoanut. She suffered from ill health with slight pain at times during the autumn and winter.

I saw her in May, 1887, and agreed with Dr. Meyers in a diagnosis of pyo-salpynx and advised laparotomy.

She was seen a few days subsequently by a distinguished surgeon from the eastern part of this state. I did not learn what was his diagnosis, but Dr. Meyer's informed me that he made an incision into the vault of the vagina, did not reach the pus cavity and placed a drainage tube in this incision. The chairmen of the sections on surgery in their reports on progress, can mention this attempt to drain a cavity which has not been reached as one of the remarkable achievements. I have no reason to think a patent has been secured for this innovation, and therefore any gentleman who wants an excuse for charging a three hundred dollar fee, will find a precedent in this absurd surgical procedure. The pus, however, did not take the hint thus ingeniously offered to it to follow the lead of his drainage tube, but found its way through the rectum a few days afterwards. The discharge continued eighteen months, when the patient regained her health, but she still suffers pain occasionally.

*A DIAGNOSTIC CONUNDRUM.

By ROBERT H. BROWN, M. D., Sioux City, Ia.

In reporting the following case I am not moved by the spirit that would suggest the queer, nor by the desire to present something different from the experiences of other men. I hope, by drawing out discussion to either have my own theories demolished, or if not, then to impress upon the medical fraternity here assembled, including myself, the importance of isolation and antisepsis, in that scourge of our latitude, tuberculosis. The point in question, in the paper, will be the diagnosis, and I have therefore omitted all reference to treatment except in so far as points of treatment bore directly upon the diagnosis.

In the spring of 1889, a man about thirty years of age, consulted me concerning the condition of his lungs. I found them both already far advanced in tubercular consolidation. His family history was a faultless one. Not a single relative, so far as he knew, had ever died of pulmonary phthisis, and he knew the history well. He never came under my hands for treatment, but remained in the city a short time at the residence of a sister, and then went to Colorado, returning in August to his own home in a neighboring town, to die. Just before his death, the sister at whose house he had been in the spring, and who furnishes the subject of this paper, was with him, and to a degree cared for him, for a week or two. This lady was 27 years old, of medium weight, well nourished, married and mother of three children. One of these died in infancy, of whooping-cough, but the other two are vigorous, sturdy boys, of 5 and 7 years. She was of light complexion, rather inclined to be ruddy, and was at the time in perfect health. She was again pregnant, advanced about five months at the time of coming into my hands. During the month of September I was at her house quite a number of times, attending to her children, both of whom had slight illness. During this time she made no complaint, and to all appearances was absolutely well. When questioned afterward she claimed to have been in perfect health. On October 3d, less than six months from the death of her brother, her husband came to my office and told me she was threatened with quinsy, an affection which she had had quite frequently when a girl, and once only a year or two ago since I knew her.

I prescribed a little nitrate of pilocarpine,

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*Read before the Medical Society of the Missouri Valley, at Sioux City, Ia., December 19, 1889.

but did not see her till October 12th, an interval of nine days. At that time all swelling of tonsils had subsided, but there was left a feeling of rawness of the throat, and a small spot opposite the larynx was at times painful and all the time sensitive to the touch. There was no cough nor anything to point to lung complication. She was slightly feverish at night and had not been eating well since the throat trouble began, but there was not enough constitutional disturbance to excite apprehension. I remember, however, being somewhat puzzled as to what that tender spot on the throat might mean. I did not appreciate till sometime afterward the seriousness of the conditions before me. I prescribed a simple throat wash and left with orders to report any new developments. There is a lapse of eleven days till I saw her again. I now found her with considerable fever and all the appearances of acute coryza, accompanied by severe cough and almost complete aphonia. The pain in the larynx was severe at times, but otherwise there was no material change in it. I devoted my attention to re-establishing the equilibrium of the circulation, and quieted the severity of the cough with ipecac and deodorized opium.

In the course of a very few days the cough loosened up and she began to expectorate freely, but the temperature was steadily going higher day by day and the cough becoming more and more aggravated. From that time on till November 7th, a period of about two weeks, she was never without fever ranging from 100° F. in the morning to 102⅕° F. at night. The expectoration increased until it became something appalling. The husband insists that there was over a pint of it in a single night. I did not measure it, but suppose this estimate be twice too large (and it is not) the quantity is still something wonderful. The material expectorated was at first glaring mucus, later muco-pus and was at times excessively offensive.

Nothing but opium would in the least mitigate the severity of that cough, and I was obliged to use it quite freely—five to eight minims of the deodorized tincture every two or four hours, in various cough syrups which I prepared.

But I must now go back in my description to November 1, just about one week after the first appearance of cough. By this time the pain in the larynx had become such a prominent feature as to demand special treatment. I furnished the patient with a steam atomizer, and used for a few days a spray containing tar, opium and belladonna. This gave decided relief for a few days and then ceased to be anything but an annoyance. About this time she had two or three hemorrhages of an ounce or two each of bright arterial blood, which I believe came from the now evident laryngeal ulcer. Also about this time she took to her bed permanently, having become too weak to move around longer. For the larynx I soon substituted a spray of eucalyptol and vaseline, with better results, so far as the ulcer was concerned, or at least I thought so, for the pain gradually diminished and the voice became a little more vocal, the hemorrhages ceased and the tenderness to the touch became less marked, although it remained in a considerable degree to the end. Near the end of this first week in November the severity of the cough began to subside. The expectoration diminished very greatly, as though an abscess had been emptied or a crop of tubercles matured, broken down and eliminated. With this the high temperature subsided and the pulse approached the normal. These were results very desirable in themselves, and should in the natural order of events have been followed by great improvement in the condition of the patient, but far from it in this case. The patient was rapidly getting worse. Twice about the time of the amelioration of the cough, was she seized during the afternoon with a pronounced rigor. I was not able till long afterward to form any definite idea of the significance of those chills. Physical exploration of the chest revealed nothing like a pneumonic extension of inflammation, and fever was never high enough to warrant that conclusion. Auscultation an percussion revealed some solidification an breaking down in the apices of both lungs, bu not enough to account for symptoms presen

Prior to the time of these rigors anothe symptom was projected into the case. Sh began to complain of headache—headache that detracted her attention from most of her other symptoms and centered her thoughts upon her temples. She repeatedly spoke to me concerning it, and I tried bromide in large doses and in small; chloral, ditto; bromides and chloral mixed, hot applications and antipyrine with no modifying effect upon that pernicious symptom.

She began to be sleepless from this headache and next to persistently vomit, interfering with and almost altogether preventing nutrition. These symptoms grew rapidly worse and there supervened an intense nervous irritability that warned me that we were on dangerous ground.

I had been giving stimulants pretty freely, as is my custom in tuberculosis, and opium, as I said above, was forced upon me by the exigences of the cough. I now set about withdrawing these gradually, but found to my surprise that the whisky was the only thing that made the taking of nourishment at all possible, and the opium, the patient claimed, was the only remedy I had ever given her which had in the slightest degree alleviated the pain in the head.

I persisted however and gradually diminished both, discontinuing both by the end of the week. I was driven to take this step because the intensity of the nervous manifestations was such as to suggest to the casual observer the similarity of her condition to that of delirium tremens. I have merely spoken incidentally of the vomiting. That was now become a prominent factor. It seemed not to depend upon anything tangible. The fullness or emptiness of the stomach cut no figure. It was explosive in character and the vomited material consisted of just what happened to be present at the time. Occasionally, of course, some bile would be brought up if there was much retching. Whisky would stay down more surely than anything else, but even that came up sometimes. Now, just in proportion as these symptoms were coming to the front so the cough, expectoration, hoarseness and laryngeal pain were subsiding, although, as I have before said, they never entirely disappeared.

The headache was a peculiar one. For many days it was frontal and temporal, and gave a scowling and distressed aspect to the countenance. As time went by it gradually worked backward and centered in the base of the brain and back of the neck. The decubius was with the head thrown backward, but at no time was there actual stiffening of the muscles of the nape. The pain was constant, although paroxysmal in intensity, at times making the patient cry out with its violence.

There was some photophobia and much tenderness of the eyeballs, but at no time any strabismus. Pupils were largely dilated, but so far as I observed, evenly so. With the advance of the headache, the nervous irritability increased until it became something wonderful to behold. The jerking, twitching, writhing, turning, and the threshing about of arms, legs and head was enough to bring gray hairs to the friends and desperation to the physician. This condition was not periodical, but continuous hour after hour, day and night, and that almost without food and entirely without sleep. For three or four days before death she was mildly delirious, although nearly always momentarily intelligent when aroused.

Near the beginning of the paper, I noted the fact that she was pregnant. She was now advanced something over six months. The fœtus appeared healthy, or at least was active until a few hours before death, when I found that I was unable to excite motility.

With the approach of the headache and nervous symptoms I thought of the possibility of uræmia, and at varions times carefully examined the urine. It was always normal. Toward the last it was passed involuntarily in the bed, but each morning the patient aroused sufficiently to satisfactorily empty the bladder. No puffing of the eyelids or other evidence appeared. The bowels were constipated, but were moved occasionally without trouble, either by a mild cathartic or a glycerine suppository.

One afternoon, four or five days before death, she suddeuly remarked that she felt very queer and asked to be raised up. During this movement she discovered herself that she was partially paralyzed upon the right side.

The face became somewhat drawn and the whole side became to a degree powerless. The tongue thickened up so that she was unable to speak intelligently and she gradually became partially comatose. It was three or four hours before I saw her, and then to my great surprise and the surprise of her friends but little evidence of the paralyses remained, although she was never again as intelligent as before.

At irregular intervals she had recurring seizures of this nature of greater or less severity, and thenceforth there was considerable variability of the respiration. I do not mean sighing respiration, or the irregularity of infantile breathing, but intermittent—breathing naturally for an hour or two, followed by slow, deep respiration, simulating coma, and then rapid shallow breathing for a corresponding time.

Now the group of symptoms thus far depicted point surely to one diagnosis, but with them there ought to have been considerable fever and rapid variable pulse. My hopes and the hopes of her family were sustained till near the last by the absence of these symptoms. The husband often reported to me that her face had been flushed and her skin hot during my absence, but the thermometer during the whole of the last week of her illness never registered above 99° and the pulse was never above 90, most of the time varying from 72 to 84. I made my observations at all times of the day from 9 o'clock in the morning till 11 o'clock at night. Early in the case Dr. Perrin Johnson saw her with me, and tried to make a laryngoscopic examination, but that was unsatisfactory, because it wearied her too much. My partner, Dr. Ross, saw her several times and during the last three days of her life Dr. Conniff saw her a couple of times with me. On November 16 she took a little more nourishment than usual, and that night seemed to get a little sleep. The next morning she seemed revived somewhat, but the breathing was shallow. It did not differ from what it had been a dozen times before, so caused no special apprehension.

It was at this time that I determined that the fœtus in utero was dead. Soon the intense headache returned, she had another mild recurrence of the paralytic seizure, gradually settled into stupor and died comatose during the following night. The rapidity of this case upon my theory of it is the most remarkable part of it. On October 3, simple engorgement of the tonsils; October 12, symptoms of ulceration of larynx; October 23, first appearance of cough; November 1, expectorating pus very copiously; November 7, sufficient prostration to confine to bed; November 10, meningeal trouble fully developed; November 17, death. Giving a period 44 days from first engorgement of tonsils, 35 days from first appearance of ulceration of larynx and 24 days from the first appearance of cough, and about 13 days from apparance of meningeal symptoms.

This ends the clinical history of the case and I will detain you but a few moments longer, while I indicate my theory of its pathology, that done, its moral will need no elaboration.

Notwithstanding the facts of absence of fever and undue disturbance of circulation, I believe this woman died of acute miliary tuberculosis. I shall not attempt a scientific explanation of the absence of these symptoms because I confess I do not understand it, but the balance of the evidence is so overwhelming as to make them unnecessary. It goes without saying that she had one disease and not a half dozen diseases. The ready formula "complication of diseases" is all very well for a layman when he is anxious to cover up a bad record in a life insurance examination, but the scientific physician must know and be able to state in exact terms the cause of death.

Quinsy, ulcerative laryngitis, pulmonary tuberculosis (or perhaps bronchiectasis) and meningitis (or perhaps an unknown reflex neurosis of great enough severity to cause death) each of simple and independent origin were never yet associated cotemporaneously in the same individual. The great law of compensation holds good in the physical and pathological world as surely as it does in the financial and moral. That the vigil and cerebral agony in this case were simply reflexes from some condition incident to pregnancy is not supported by the slightest evidence, and I reject it in toto.

Here were a brother and sister, who, though they had unexceptional ancestry so far as I could learn, each furnished a favorable field for the reception of the germs. The brother got the disease and died of it. The sister had a history of repeated quinzy, consequently her throat offered favorable physical conditions at least for the receiving and the retaining of the germs. They were introduced into her system in great numbers through the respiratory organs, finding their lodgment in the enlarged crypts of the tonsils, in the folds of the larynx and apices of the lungs.

Those situated upon the tonsils had an abortive growth, due to their exposed situation, and their only effect was an engorgement of the throat, making the patient think she was going to have an attack of her old complaint, quinzy. It may be that the thorough salivation caused by pilocarpine, which I gave her, had some influence in washing them out. The rest lodging in more protected ground, developed rapidly, and a tubercular ulcer appeared upon the larynx and tubercular nodules were disseminated through the lungs. The first crops matured, broke down and were eliminated, giving rise to the rise and subsidence of pulse and temperature.

While this process of breaking down was going on arteries and veins, one or both, were involved in their wall tissues and the current of blood swept away the debris, carrying the germs into the general circulation. Some of these were deposited in the meninges of the brain and there fulfilled their only function, to increase and multiply and replenish the earth.

With this view, all the seeming discordant elements of the case fall into harmony, and the absence of a single expected symptom need not disturb us.

As to the lesson which such cases have for the profession, I need only say that I expect to live to see the time when greater precautions will be taken to prevent the spread of consumption than are now taken to quarantine diphtheria or any other microbiotic disease. That principle once established, there will be hope of eliminating the disease from the earth.

OPERATION FOR STRANGULATED HERNIA AND RADICAL CURE.

By B. F. Jones, M. D., Kearney, Neb.

On June 4, 1888, Wm. H., freight agent on the B. & M., came to my office and said that in assisting to push a car, his truss had broken. The hernia had protruded and he was unable to reduce it, as he had previously done on many occasions. He was placed in position and after difficulty, assisted by my partner, Dr. L. P. Woodworth, the hernia (right inguinal) was reduced, a new truss was substituted and the patient sent home. Before arriving there the truss slipped sufficiently to allow the hernia to again protrude. Medical aid was immediately summoned and when it arrived every effort was made to reduce the hernia but without avail. We then proposed and urged the use of an anesthetic, to which the patient refused to submit. We then applied hot fomentations and placed the patient in bed in the recumbent position, with the hope of relaxing the parts and again attempting reduction. The applications were regularly applied until 9 o'clock on the following morning. The parts then presented a somewhat congested, but soft appearance. Anesthesia was then proposed and accepted, but an attempt at reduction proved futile. The necessity of an operation was then urged, but was refused by his wife and friends and the patient was allowed to recover from the anesthetic. Cold applications were then decided upon and were applied in the form of pounded ice placed in a rubber bag. In a short time vomiting began which could not be controlled and about noon began to be stercoraceous; at 1 o'clock a messenger was dispatched for a doctor, reporting that "gangrene" had set in. Upon reaching the patient I found that the scrotum dorsum of the penis and entire inguinal region extending nearly to the umbilicus, were in a complete state of ecchymosis. Vomiting became more frequent and all the symptoms of strangulated hernia were present.

An operation was again urged and accepted by all concerned After two hours delay, in the presence of Dr. Porter and Dr. Hoover, the patient was placed in position, anesthetic administered and the parts were shaved and cleansed. Rigid antiseptic precautions were used throughout. An incision two and one-half inches long was made in the integument over the line of the tumor. The tissues were carefully divided down to the hernial sack. This was greatly distended with dark extravasated blood, which spurted a foot high upon being liberated. The scrotum was also completely filled. After cleaning the parts the stricture was successfully divided. The intestines were examined and found intact and allowed to return to the abdominal cavity. The wound was then sutured by six deep sutures of iron-dyed silk, left sufficiently long to protrude. Six sutures of the same material were also used in the integument. Lastly the wound was sprinkled with powdered salol and covered with bi-chloride gauze securely retained by the roller bandage. The patient was then allowed to recover from the anesthetic. Vomiting did not recur after the operation and the temperature of the patient did not rise above 99° F. Upon the tenth day the wound was examined, primary union was secured and the superficial sutures were removed. The deep ones were not touched until six weeks later, when they were absorbed beneath the skin and were easily removed.

It is now a year and a half since the opertion. The patient is pursuing his usual avocation, enjoying good health and there is no sign of the return of the hernia, which before the operation was such a source of pain and annoyance to him.

*PREVENTIVE TREATMENT OF COMMUNICABLE DISEASE.

By A. B. Somers, M. D., Omaha, Neb.

The time honored adage, "An ounce of prevention is better than a pound of cure," has withstood the vicissitudes of time because it contains within itself the essential element, *Truth*, which is everywhere and always eternal.

While in theory we recognize the truth of this adage when applied to the prevention of the ills that human flesh is heir to, it appears that in actual practice we are prone to make it "more honored in the breach than in the observance." In past ages there has been great search for panaceas and later for specifics, and the labor spent in these directions has not been altogether spent in vain. Yet it appears that there are no panaceas and that specifics, either for the cure of disease or relief of symptoms, are exceedingly limited in number and the hope of the future is in the line of prevention rather than in the line of cure.

It is no part of my intention to present new or novel ideas at this time, but rather to bring to your attention a few ideas which have been tried and found to work well in practice. In fact, many of the so-called new ideas are exceedingly old; so old as to have been forgotten and revived again.

I find that very early in the world's history a wise statesman laid down rules for the control of diseases that are hard to improve upon, as follows: All persons sick with communicable disease should be set apart from the rest of the people, their clothes should be purified, and in the more aggravated cases, burned. Explicit directions were given for the purification of the persons of those that had recovered from disease, and the time determined that the person should dwell alone without the camp as well as without the tent after being permitted to enter the camp, the clothing to be purified, and in the more aggravated cases to be burned. We have here enumerated all the underlying principles of preventive treatment of disease: 1st, for the well, *cleanliness;* 2d, for the sick, *isolation;* 3d, for the recovered; *purification.*

There are difficulties in the way of applying these principles in this day and generation that our fathers of a primitive age knew nothing of; but we live in an aggressive age, and are accustomed to overcoming difficulties, and why need we hesitate to strike for the eradication of disease?

The most effective work in this direction must be through organized effort, sustained by the law of the commonwealth and the public treasury. So far this work has been largely carried on by boards of health, but Nebraska, I am sorry to say, is one of a very few states that has no board of health, and Omaha, the pride and future metropolis of the Missouri valley, has a board of health that exists only in name.

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*Read before the Omaha Medical Club, January 17, 1890.

How long, think you, would our people be willing to do without a well equipped fire department to protect our property from destruction by fire? How long would we be willing to do without well disciplined police for the protection of our homes from lawlessness and crime? How long would we remain quiet with a reported case of small-pox in our midst, notwithstanding the protection afforded us by vaccination, without satisfying ourselves that the person suffering from the disease was properly isolated, the house quarantined and every precaution taken to prevent a spread of the disease? Yet the danger to this community from diphtheria, scarlet fever, typhoid fever, puerperal fever and other communicable diseases, are greater than from fire, thieves, or small-pox, and a well equipped board of health is of as much greater importance to this city than a fire or police department, as human life and health are of greater importance than worldly possessions.

We need and can afford a city board of health, whose duty it shall be to inspect buildings, plumbing, drainage and sewer systems as well as water and food supply. A board to whom all cases of communicable disease will be reported, and whose duty it will be to trace such disease to its source and adopt all the means of precaution against its spread known to modern science. There is very much of ignorance upon this subject among the people at large, and I might truthfully say among physicians at large, but I fear that in many cases the ignorance is surpassed by the carelessness of those directly interested.

With the present state of affairs the family and the community must depend largely upon the intelligence and honesty of the physician in charge of the sick to prevent the spread of communicable disease, and physicians know full well that this is too often a thankless task. It is like killing the goose that lays the golden egg. While the people are willing to pay us for our services in caring for their sick, I am afraid we would be poorly paid for our efforts in preventing disease; and yet, which is of greater value, the prevention of a case of sickness, with all that sickness implies in the way of watchful care, suffering and expense, or the watching of a case of sickness to a successful, yea, too often, to an unsuccessful termination? The conscientious physician will do his share in the way of sanitary work, but his work should be supplementary to a board employed and paid by the state or city, and not primary.

Listerism has revolutionized modern surgery, and I speak not without due consideration when I say that the faithful application of the principles of cleanliness, isolation and disinfection to the treatment of all communicable disease will show greater results than Listerism has in surgery. In fact, it is within the limits of possibility to prevent any communicable disease from becoming epidemic and to eventually stamp them out of existence.

One of the essential points in the preventive treatment of diseases, is a correct understanding of the distinctive characters of each disease and their methods of communication. Scarlet fever, for instance, is communicable from the day that the redness and soreness appears in the throat until the period of disguamation is completed, which, as a rule, is at the end of six weeks but not always at the end of three months. During this time the disease may be communicated by anything that has touched the patient, such as air, food, clothing, sheets, furniture, toys, books, wall paper, curtains, cats or dogs. All discharges from bowels, kidneys, nose, mouth, eyes, ears and skin are dangerous; and the poison may remain active for months or years by means of clothing packed away in drawers or trunks.

Diphtheria is also communicable in much the same way as scarlet fever, through anything that may have come in contact with the patient, and in addition seems to be able to travel in the air of sewers and thus pass from house to house; also to rise in emanations from putrid privies and cess pools. It can also, undoubtedly, infect food, milk and water and with them enter the bodies of children.

These being the facts, so far as known in regard to the methods of communication of these diseases, the following precautions against the spread of these diseases will naturally suggest themselves.

1st. Complete isolation of the patient from the family (except the nurse) and from the public until a physician declares the danger over.

2nd. The sick room should be in the upper part of the house, if possible and as far removed from the family as possible. The room should be large, pleasant, light and well ventilated. The room should be cleared of all needless woolen or other draperies. The carpet had better be taken up and rag strips laid on the floor to deaden footsteps. All furniture not needed should be removed. A sheet wet with a solution of sulphate of zinc should hang before the door connecting the sick room with the rest of the house. No person but the physician and nurse should enter the sick room until the patient has recovered and the room has been disinfected.

3rd. The nurse should not mingle at all with the rest of the children in the family and as little as possible with the adults. Her outer dress should be of some material that can be washed.

4th. Pieces of rag should be used in place of handkerchiefs and immediately burned. Playthings used in the sick room should also be burned. A vessel containing a disinfecting solution should be on the bed for the patient to spit in.

5th. The nurse should wash her hands when soiled in a disinfecting solution and then with soap and water.

6th. All glasses, cups or other vessels used by or about the patient should be cleaned with scrupulous care, in boiling hot water, before being used by others; and all unconsumed food or drinks touched by the patient should be burned.

7th. All discharges from the patient should be received into vessels charged with disinfectants and thrown in the water closet or buried at least one hundred feet from any well.

8th. The patient's clothing and the bed clothing should be placed in a disinfecting solution for four hours and then thoroughly boiled.

The patient should remain in the room until all sores have healed; should take several warm baths under proper precautions, and should not appear in public until all the clothing worn previous to and during his sickness has been thoroughly disinfected. After scarlet fever it is well to anoint the body with carbolized oil or vaseline daily during the period of peeling. In case of death the body should be wrapped in a sheet saturated with a solution of corrosive sublimate or placed in an air-tight coffin and buried immediately, the funeral being as private as possible.

The child's playthings, papers, books, strips of carpet, badly infected woolen clothing, etc., should be burned. If possible, let the room be thrown open and aired for several days. Let the walls, floors, woodwork and furniture be washed with a disinfecting solution, afterwards whitewashing the walls and ceiling, or the room may be fumigated with sulphur. To do this, two pounds of sulphur should be burned for every one thousand feet of air space, all doors and windows being closed. The sulphur fumigations are rendered more effective if the room is filled at the same time with steam of hot water. Let the room remain closed for twenty-four hours, then air for several days.

Trusting that you may be interested in the practical working of this plan, I will give you statistics of results as compiled by Dr. Baker, secretary of the State Board of Health of Michigan. He states that in the year of 1886 there were 324 outbreaks of scarlet fever in Michigan, with an average of 5.30 cases to each outbreak and with a death rate of .31 to each outbreak. In 45 outbreaks isolation or disinfection or both were neglected and the average number of cases per outbreak was 13.84, with an average death rate of 1.02 per outbreak. In 58 outbreaks isolation and disinfection were both enforced, with an average of 2.74 cases per outbreak and a death rate of .14 per outbreak.

A comparison of these results shows that the intelligent application of the principles o isolation and disinfection prevented 80 pe cent. of the cases of sickness and 85 per cent of the deaths in this instance. In the remai ing outbreaks, 221 in number, isolation an disinfection, one or both, were neglected o executed in a doubtful manner, with an ave age of 4.23 cases per outbreak and an ave age death rate of 1.95 per outbreak. These latter cases demonstrating the fact that isolation and disinfection, to be effective, must be thoroughly applied.

During the same year there were 461 outbreaks of diphtheria, with an average of 6.69 cases per outbreak and with a death rate of 1.42 per outbreak. In 102 outbreaks, isolation or disinfection or both were neglected, with an average of 16.18 cases per outbreak and with a mortality of 5.25 cases per outbreak. In 116 outbreaks isolation and disinfection were both enforced, with an average of 2.86 cases per outbreak and a death rate of .66 cases per outbreak.

A comparison of these results shows more favorable even for the plan of treatment by isolation and disinfection in diphtheria than in scarlet fever, 83 per cent. of the cases and 86 per cent. of the deaths being prevented.

Of the 243 outbreaks, in which it is doubtful whether or not disinfection or isolation were secured, there was an average of 4.54 cases per outbreak, with a death rate of 1.03 cases. Here, as in scarlet fever, we learn the importance of thorough work under intelligent guidance and we may also learn how the methods that are really valuable may fall into disrepute through inefficiency of administration.

In typhoid fever we have a communicable disease, but largely in a different manner.

Contaminated water is believed to be the most frequent cause of this disease; the contamination coming from the fæcal discharges of some person suffering from the disease. This being a fact, the principle precaution is to protect the water supply. The outbreak of typhoid fever at Plymouth, Pennsylvania, where over one thousand cases and many deaths occured, is an illustration of how great a calamity may follow the fouling of a general water supply by the discharges of one person sick with typhoid fever. The most scrupulous care then should be taken to keep the present sources of drinking water pure and to procure future supplies only from clear sources. Privy pits should be absolutely abolished, and where any doubt of its purity exists only boiled water should be used as a beverage. Emanations from the discharges of patients, infected privies, or from infected sewers by means of sewer gas, may cause the disease.

In the care of the sick no special precaution need be taken to isolate the patient from the family, but otherwise the same precautions that have been recommended in scarlet fever and diphtheria should be enforced, special care being taken to receive all discharges from the body into vessels charged with disinfectants. The convalescent patient is not dangerous to his friends and should have cheerful company.

But a remark in regard to puerperal fever. It is not proven that this disease is caused by one specific germ alone, in fact, it seems quite certain that it may be caused by a variety of infectious materials, but it appears to be quite certain that in a large proportion of cases this infectious material is conveyed directly to the lying-in woman by the physician or nurse, this being a fact, it stands every physician in hand to give dire heed to all the principles of cleanliness and antisepsis in all the midwifery cases he may attend.

A direct diagnosis is an important factor in the thorough preventive treatment of communicable diseases, for it would not be well for a physician to subject all cases of acute tonsilitis or exanthema to the same rigid isolation that he would diphtheria or scarlet fever, and yet, if one must err it is safe to err on the side of too rigid isolation rather than too great liberty.

A curious fact has been demonstrated by antisepsis as a preventive of communicable diseases, namely: That the mortality has been lessened by a greater per cent. than the sick rate, or in other words, the most effective preventive treatment is the most successful curative treatment. This may be accounted for from the fact that every case of sickness tends to increase and intensify the poison of the disease, so that subsequent cases are likely to be of a severer type than the first. Prof. Jorcohi, of New York, recognizes this fact when he recommends that prolonged cases of diphtheria be removed to another room to allow an opportunity for cleansing the sick room, when the patient may be returned to it again.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

Books, Journals and Monthlies, for review or exchange should be sent to the Editor.

All correspondence must bear the full name and address of the writer. Editor's address, No. 320 S. 15th St., Omaha.

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OMAHA, FEBRUARY, 1890.

WE learn from the St. Joseph *Medical Herald* that the medical profession of that city are anxious to have their public library follow the example of Omaha in adding a good selection of medical books for the benefit of the local profession. This is certainly a wise move, and if successful will be mutually advantageous to the physicians and their patrons. The number of choice medical books now on the shelves of the Omaha Public Library is nearly 200, and additions are constantly being made. In fact, the library committee never refuses to purchase any book of worth which is suggested.

THE OMAHA CLINIC ABROAD.

It is very gratifying to the publisher of THE OMAHA CLINIC to find it read, and its articles commented upon and copied all over the union. It must also be a source of satisfaction for our contributors to know that their efforts receive that appreciation, which study and labor so richly deserve. These thoughts were engendered by the fact of the *American Journal of Obstetrics* bringing in its January number a whole page abstract of the article on the "Conveuse of Fuerst," published in our October issue; when it is well known that that journal seldom, if ever, abstracts any article published priorly in American journals.

Still more did we feel justified in saying these words, when other journals, the wide-awake publication of Dr. Emory Lanphear, for an example, the Kansas City *Index*, asked for permission to reprint the very important paper published in our January number on "Fractures of the Femur." Now comes the author of a work on Railroad Surgery, soon to be issued from the press of Chambers & Co. of St. Louis, and requests the use of the cuts, accompanying the same article, that he may incorporate them in his work, together with abstracts from the paper. The compliment to THE OMAHA CLINIC and the writer of the paper referred to, is enhanced by the fact that the manuscript of the whole work is already in the hands of the printer, yet the author deems our publication of so much importance that he prefers to rewrite part of his work in order to give his readers the benefit of our labors.

The first number of a journal generally contains an editorial upon "*the needs*" of the profession for the new publication. The publisher of THE OMAHA CLINIC is very much pleased to know that *the demand* is justifying our publication; thanks to our contributors and co-laborators.

CHLOROFORM ADMINISTRATION AND THE HYDERABAD COMMISSION.

Our readers will remember the appointment of a commission by the government of the Nizam, at Hyderabad, in the year 1888, consisting of Surgeon Hehir, I. M. D. President and two members, Messrs. J. A. Kelly, L.R.C. P. of S. Ed., and A. Chamaretta, L.M.S. This commission was called for by Surgeon-Major E. Lawrie, Residency Surgeon, Hyderabad, because, having always believed in the truth of Syme's teaching, that chloroform can be used judiciously, so as to do good without the risk of evil, he desired to show by experiments upon dogs that in death from chloroform the *respiration always stops before the heart*. The experiments of the commission led them to conclude "that chloroform may be given to dogs by inhalation with perfect safety, and without fear of accidental death, if only the respiration, and nothing but the respiration, is attended to throughout."

To these conclusions the *London Lancet* of March 20, 1889, interposes this demurrer: "All those who are familiar with chloroform are well aware that syncope, when primary, as a rule supervenes in the initial stages of inhalation, while secondary syncope, due to respiratory embarrassment, is the result of accumulation of chloroform in the blood, leading to paralyses of the medullary centres, and occurs in a late stage of the administration. The primary syncope it is rarely, if ever, possible to induce in dogs, although, unfortunately it is this form of chloroform heart failure, which does occur in human beings, and which it is almost impossible to remedy."

To these exceptions Dr. Lawrie interposes, and we think correctly, that it is conceivable that syncope may occur in the initial stages of inhalation of chloroform, though he has never met with a single instance of such an accident. The public dread chloroform more than they do operations, and fainting from fear in the initial stages of inhalation is intelligible, so is failure of the heart from shock, induced by operative interference, before anæsthesia is complete.

With regard to the secondary syncope the *Lancet* states that it is due to respiration embarrassment (through the respiratory centre?), which is an indirect cause, and, in the same sentence, that it is the result of paralyses of the medullary centres (circulatory?) from accumulation of chloroform in the blood—which is a direct cause. Both these statements cannot be true. The truth is that secondary syncope has no more real existence than primary syncope. In poisoning by chloroform the heart fails, when the respiration ceases, and never before. With the cessation of respiration, the further accumulation of the drug in the blood ceases, and the heart rapidly, or gradually stops beating, as a direct result of the stoppage of respiration, and as an indirect effect of the poisoning with chloroform.

The *Lancet* would trust to the heart and circulation for signals of danger in chloroform administration. Our contention is that, if the administration is ever pushed far enough to cause the heart to show signs of danger, the limits of safety have already been exceeded, and a fatal result must almost inevitably ensue. So far from disregarding the heart as a factor in chloroform dangers, we say that any affection of the heart, either direct or indirect, is the one danger to avoid. But we say, further, that the respiration invariably gives warnings when a dangerous point is approached, and consequently that it is possible to avert all risk to the heart by devoting the entire attention to the respiration during chloroform administration.

Syme taught: "We are guided as to the effect of chloroform not by the circulation, but entirely by the respiration."

Erichson teaches: "When fully anaesthetized the patient requires the most careful watching by the person who administers the chloroform; his finger should never be off the pulse nor his eyes taken away from the countenance of the patient." On the one side Dr. Lawrie and the first Hyderabad commission, on the other the *Lancet*, the commission of the Royal Societies and many distinguished investigators.

His royal highness, the Nizam, realized this contradiction and also the importance, if possible, of a final adjustment of the differences. He, therefore, offered one thousand pounds to defray the expenses of one or more experts, to be selected by the *Lancet*, to go to Hyderabad and repeat the experiments of the first commission and to make such others as they may deem proper. The London *Lancet* selected as its representative one high in authority in pharmacological work and as a scientist. "It may perhaps be considered as a further advantage that in his work 'Pharmacology and Therapeutics' doctor Lauder Brunton, the *Lancet's* choice, has very decidedly stated that one of the dangers resulting from chloroform is death by stoppage of the heart."

Dr. Lauder Burton and surgeon major Bomford arrived at Hyderabad October 21st, 1889 and the second commission was constituted as follows: Surgeon major G. Lawrie, president; Dr. Lauder Brunton, Surgeon major G. Bomford, Dr. Rustomgi (the Nizam's medical service), members; Dr. Bomford, secretary. Associated with this second commission were the president and members of the first commission and Mr. Wm. Mayberry, who administered the chloroform.

This commission killed 268 dogs and 31 monkeys outright, and 86 dogs and 39 monkeys were subjected to artificial respiration at varying intervals after the natural respiration had been arrested by chloroform. The animals which were killed had chloroform administered to them in every possible way and under every conceivable condition.

The immediate result of this very important work was the conversion of Dr. Brunton to the views of Dr. Lawrie and the first Hyderabad commission, the position of which was sustained in every particular by the second commission. Secondarily, it changed the position of the London *Lancet* as expressed in the editorial of January 18, 1890.

"From the report we now publish it will be seen that the discrepancy between the views of different schools arises from the fact that sufficient consideration has not been given to the conditions under which chloroform is given. Although it may paralyze the heart if applied directly to it, yet this condition does not occur in practice, for here it is neither applied to that organ nor yet is it blown forcibly into the lungs. It is inhaled by the patient and when this is the case it stops the respiration before the heart. The practical outcome of the research would appear to be that deaths from chloroform are not inevitable. They are therefore preventable, and by due care in its administration they may be with certainty avoided. The conclusions of the commission are sweeping and without abundant evidence cannot be accepted."

[We print the "*practical conclusions*" on page 305 in this number, and leave it to our readers whether they will adopt the guarded position of the *Lancet* or, like the writer, accept the commission's conclusions unconditionally, having been corroborate by the experience of a lifetime.]

TRANSPORTATION OF CORPSES.

Only a short time ago a child died of diphtheria in Ravenwood, Ill. The body was removed to Zanesville, O., where, doubtless, sympathizing friends, and others, "viewed the remains." As a result an epidemic of diphtheria broke out, with five deaths of children, at last accounts. In this case there is some question as to who is to bear the blame, it being alleged on one hand that the doctor gave a false certificate, and on the other that the certificate showed the cause of death to be diphtheria, but the railroad company took the responsibility. However that may be, it is a glaring illustration among thousands of others that might be adduced, of the danger of such exposures, and the great importance of the enforcement of the strictest hygienic rules. Unfortunately for the citizens of Nebraska, their wise lawmakers have refused to make any rules or regulation for their protection, and it has been left to the much abused "baggage-smasher" to formulate directions for the protection of those who do not care to protect themselves.

In the January Bulletin of the Iowa State Board of Health, we find the rules for the transportation of corpses adopted by the National Association of General Baggage Agents, at its last session, July, 1889, in Detroit, Mich., and subsequently adopted by the Iowa State Board of Health, and went into effect January 1, 1890. These rules have been approved by all the Iowa roads—the Union Pacific and B. & M.—and are here reproduced for the benefit of all concerned as follows:

Rule 1. The transportation of bodies of persons dead of small pox, asiatic cholera, leprosy, typhus fever or yellow fever is absolutely forbidden.

Rule 2. The bodies of those who have died of diphtheria, anthrax, scarlet fever, puerperal fever, typhoid fever, erysipelas, measles, and other contagious, infectious or communicable diseases must be wrapped in a sheet thoroughly saturated with a strong solution of bi-chloride of mercury, in the proportion of one ounce of bi-chloride of mercury to a gallon of water, and encased in an air-tight zinc, tin, copper or lead lined coffin, or in an air-tight iron casket, hermetically sealed, and all enclosed in a strong, tight wooden box; or the body must be prepared for shipment by being wrapped in a sheet and disinfected by solution of bi-chloride of mercury as above, and placed in a strong coffin or casket, and said coffin or casket encased in a hermetically sealed soldered zinc, copper or tin case, and all enclosed in a strong outside wooden box of material not less than one inch and a half thick.

Rule 3. In cases of contagious, infectious, or communicable diseases the body must not be accompanied by articles which have been exposed to the infection of the disease. And in addition to permit from board of health or proper health authority, station agents shall require an affidavit from the shipping undertaker, stating how body has been prepared and kind of coffin or casket used, which must be in conformity with Rule 2.

Rule 4. The bodies of persons dead of diseases that are not contagious, infectious nor communicable, ma be received for transportation to local points in sa state, when encased in a sound coffin or metallic ca and enclosed in a strong wooden box, securely fastene so it may be safely handled. But when it is proposed to transport them out of the state to an inter-state point (unless the time required for the transportation from the initial point to destination does not exceed 18 hours) they must be encased in an air-tight, zinc, tin, copper or lead lined coffin, or an air-tight iron casket, or a strong coffin or casket encased in a hermetically sealed (soldered) zinc, copper or tin case, and all enclosed in a strong outside wooden box of material not less than one inch thick. In all cases the outside box must be provided with four iron chest handles.

RULE 5. Every dead body must be accompanied by a person in charge who must be provided with a ticket, and also present a full first-class ticket marked "corpse," and a transit permit from board of health, or proper health authority, giving permission for the removal, and showing name of deceased, age, place of death, cause of death (and if of a contagious or infectious nature), the point to which it is to be shipped, medical attendant and name of undertaker.

RULE 6. The transit permits must be made with a stub to be retained by the person issuing it; the original permit must accompany the body to destination, and two coupons; the first coupon to be detached by station agent at initial point and sent to the general baggage agent, and the second coupon by the last train baggageman. The stub, permit and coupons must be numbered so the one will refer to the other, and on permit will be a space for undertaker's affidavit, to be used in cases of contagious or infectious diseases as required by Rules 2 and 3.

RULE 7. The box containing corpse must be plainly marked with paster, showing name of deceased, place of death, cause of death, the point to which it is to be shipped, number of transit permit issued in connection, and name of person in charge of the remains. There must also be blank spaces at bottom of paster for station agent at initial point to fill in the form and number of passage ticket, where from, where to, and route to destination of such ticket.

RULE 8. It is intended that no dead body shall be moved which may be the means of spreading disease; therefore, all disinterred bodies, dead from any disease or cause, will be treated as infectious and dangerous to the public health, and will not be accepted for transportation unless said removal has been approved by the State Board of Health, and the consent of the health authority of the locality to which the corpse is consigned has been first obtained and the disinterred remains enclosed in a hermetically sealed (soldered) zinc, tin or copper lined coffin or box, or box encased in a hermetically sealed (soldered) zinc, tin or copper cases.

NOTE.—The approval of the State Board of Health for interment must be attached to the transit permit.

NOTICE.

In the Bishop Clarkson Memorial Hospital for Children, Omaha, there are a number of free beds for the treatment of the surgical diseases of children. Physicians having suitable cases for this charity may address the surgeon under whose charge they are.

DR. J. E. SUMMERS, JR.,
208 So. Fifteenth Street, Omaha, Neb.

Society Notes.

THE IOWA STATE MEDICAL SOCIETY

Will meet in Des Moines, April 16, 17 and 18. Dr. C. F. Darnall, the Secretary, requests all who wish to present papers to forward their titles to him at once. His address is West Union. Reduced rates will be secured at all points in Iowa.

The Secretary further states that they expect a large and profitable meeting and a cordial invitation is extended to the medical brethren of Nebraska to be present. We return thanks for this fraternal courtesy and hope appreciation will be manifested by a large delegation of our representative men.

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

Convenes at St. Joseph, Mo., Thursday and Friday, March 20 and 21, 1890.

The committee of arrangements consists of Drs. Geiger and Pitts, of St. Joseph, and Carter, of Omaha.

This committee is making great efforts to increase the membership of the society, to secure a good programme of papers and to ensure an entertaining and profitable time to those who may be in attendance.

We hope the attendance may be large, the papers meritorious and the discussions lively and judiciously critical.

JAMES CARTER, M. D.,
Secretary.

THE NEBRASKA STATE MEDICAL SOCIETY

Selected Beatrice as the place of meeting in 1890. The Executive Committee having the date in charge, have fixed the 13th of May, and the following circular is for the instruction of members:

The attention of the members of the Nebraska State Medical Society is called to the coming meeting, (Beatrice, May 13th.) Upon the zeal and earnestness of the members more than upon the officers depends the success and benefit attending the meetings.

Make up your mind to be at the meeting, if possible, and as the time approaches shape your business to that end. Do not depend upon someone else to write the papers, reports of cases, etc. The member who writes a paper is the one who receives the most benefit from that paper, in that it causes him to think and study to make the production presentable and, sometimes, to defend it.

Send in your titles as early as possible. They *must* be in the hands of the Secretary by April 25th, to secure a place in the printed program.

Members are urged to see that applications for membership are forwarded early, so that the work of the Committee on Credentials may be efficient. Blanks will be furnished by the Secretary. It is expected that rates of transportation will be secured.

M. L. Hildreth,
Lyons, February 15th. Secretary.

Hospital Notes.

HOSPITAL NOTES.

Neuromatous Tumor of the Median Nerve. Osteo-Myelitis of the Pleural Cavity. Resection in Hip-Joint Disease. Talipes Equinus.

[Abstract of a Clinical Lecture delivered at the Bishop Clarkson Hospital, Omaha, February 7, 1890. By J. E. Summers, Jr., M. D., Professor of Principles and Practice of Surgery Omaha Medical College.]

A man thirty-three years of age was presented who, twelve years previously, in attempting to seize a turkey perched on a fence struck his arm on its inner side, in the upper third, against the top of the fence. The shock of this injury was so severe that the man fainted. Shortly after this accident he noticed a tumor occupying the injured site, which was quite painful, and this had continued to grow until it had reached the size of a goose egg. The whole arm and hand below the growth was never free from pain. The tumor was very sensitive to pressure. Aneurism of the bracheal artery could be excluded, although about one year previously such a diagnosis had been made. Dr. Summers called attention to the difficulty in distinguishing an aneurism whose sac was obliterated by a laminated clot from some solid tumors found in the course of large blood vessels. The diagnosis of a neuroma of the median nerve was made, and a free incision, exposing the tumor and the nerve both above and below, proved its correctness. The growth (a myxoma) was enucleated from its capsule, which was made up of the filaments of the neurilemma. The nerve passed to the growth above and below, as a stem to an apple. Such tumors are extremely rare. (No interference of function followed the operation and the pain which had existed for twelve years has completely disappeared.)

The second case presented was that of a boy ten years of age, who for the past year had suffered with the usual symptoms of periostitis and ostitis of the lower half of the tibia. Although the boy had been under the care of an excellent practitioner, who had made numerous early and free incisions, yet the morbid process had not been stopped, and showed the lower end of the tibia much enlarged, with a resulting eversion of the foot. After the elastic tourniquet was applied, the surface of the lower third of the bone was exposed, chiseled into and several sequestrae removed. The lower end of the bone was occupied by a large abscess cavity, which was well scraped with a Volkman spoon. The case was not thought a favorable one for trying Schede's, or Senn's methods of repair, and was lightly packed with iodoform gauze-repair by granulation being sought.

The third case was that of a man fifty-four years of age, who had had a pleurisy with effusion, and had twice been aspirated, but the fluid had apparently returned. On introducing the needle in the seventh post-axillary intercostal space only about three ounces of serum could be withdrawn, although the physical signs indicated its presence in much larger quantity. It was supposed to be one of those cases in which the fibrous exudate was of such thickness as to present the physical signs of an effusion. One quart of serum had been removed at each of the previous aspirations. The chest of the affected side was ordered painted with iodine, and iodide of potassium given internally.

Dr. Summers next presented two cases of hip-joint disease, both of which he had resected. In one, repair was perfect and there was good function of the limb; in the other, a pelvic abscess had followed the operation, which had been opened and drained, and from the marked general and local improvement the case seemed a hopeful one as to the final outcome.

A boy thirteen years of age was shown who, two months previously had been operated upon for a high grade of talipes equinus, which had existed for eight years. The cure was perfect, but for the atrophy of the calf muscles, which would improve with time.

Correspondence.

DIPHTHERIA.

By Caswell T. Poe, M. D.
Physician to St. Francis Hospital, Grand Island, Neb.

Editor Clinic:—As I notice in the January number of the Clinic a request by the editor for any of the readers of this unique medical journal "who have had a practical experience in the use of iodide of sodium in the treatment of diphtheria" to respond, hence this article.

I will preface the few items here contributed, by observing that there is no one specific for any morbid condition, or any one disease; that the several stages of disease, the ages of the patients, also the several temperaments have all to be considered in the treatment of all the morbid conditions of the human race. Knowledge, experience and judgment are requisites both for diagnosis and treatment. I ask in all candor, are there any specifics for the treatment of pneumonia in one or the three stages, that are unfallible? Or is there only one remedy for the several varied conditions of Peyer's glands in typhoid fever? Has the medical profession found one article in the *materia medica* indicated in every stage, in every case, in every class of meningeal diseases? Every intelligent, regular physician will answer, no. If such were the case, the science of medicine will have lost its prestige as a science, and the collateral sciences on which it is based will have become obsolete.

In my forty years practice of medicine, counting three years practice with preceptor prior to graduation, it has been my lot to treat many cases of diphtheria. In the epidemic of 1879–'80–'81, I had five hundred cases of genuine malignant diphtheria. Of this fact several of my companions in the profession can bear me witness. These cases were located in Hall, Hamilton and Adams counties, Nebraska. Of each case I have the name, age and treatment in my case book, to which I now refer. In one hundred of these cases I used iodide of sodium as a solvent for the membrane, concomitant with alteratives, tonics, stimulants, antiseptics and laxatives. My favorite alteratives are, hyd. sub. mur., in very minute doses; or bi-chloride hyd., also tr. ferri. mur. Tonics, Iron and quinia sulp. Stimulants, brandy. Antiseptics, an aqueous solution of carbolic acid, *very weak*, or creosote with pot. chlorat. Laxative, castor oil. For a solvent for the membrane, sulphite sodium or iodide of sodium in solution. Sometimes with adults I used a sol. salicylic acid. Seldom boracic acid, often simply sulphur in powder. Twenty-five treated with iodide of sodium as a solvent, died,—four of membranous croup, twenty-one of heart failure, after every vestige of membrane had disappeared; stimulants were of no avail. The other four hundred and seventy-five convalesced finely, although we had partial paralysis, renal and dropsical sequelæ in several. In the treatment of all the cases I used all the judgment and skill I had. The cases were so malignant that all the cloths and clothing used by patients were burned as soon as used once; disinfectants used continually in the apartments, with proper ventilation and temperature; in nearly every instance, however, it was impossible to keep the odor dispelled.

One hundred treated with iodide of sodium. Four hundred convalesced without iodide of sodium as a solvent. Seventy-five convalesed when it was used. Total amount of cases, five hundred.

Miscellany.

Practical Conclusions of the Second Hyderabad Chloroform Commission.—The following are the practical conclusions which the Commission think may fairly be deducted from the experiments recorded in this report:

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If during an operation the recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To insure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen, is to be strictly avoided; and no assistants or bystanders should be allowed to exert presure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs without doing anything which can by any possibility interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap with a little absorbant cotton inside at the apex.

V. At the commencement of inhalation care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting, struggling or holding the breath. If struggling or holding the breath do occur, great care is necessary to avoid an over-dose during the deep inspirations which follow. When quiet breathing is ensued as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear, or may deepen, after the chloroform is stopped (*vide supra* sub-paragraph 2 and 9 of conclusions in paragraph 30). Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anæsthetised and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthesia should never under any circumstances be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and not be allowed to come out and renew the stage of struggling and resistance.

VIII. As a rule, no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chances of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will in a short time know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

XI. If the breathing becomes embarrassed the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time it is well to assist the respiration artificially until the embarrassment passes off.

XII. If by any accident the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely reestablished.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that atropine does any good in connection with the administration of chloroform, and it may do a very great deal of harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

The Commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety so as to do good without the risk of evil.

Edward Lawrie (President),
T. Lauder Brunton, }
G. Bomford, } Members.
Rustomji D. Hakim, }
Edward Lawrie, Sur.-Major.
Hyderabad, December 18, 1889.
(True Copy.)
—*London Lancet.*

Ingrowing Toenail.—Dr. Hofmann, of Erlangen, recommends a simple and painless method of treating this complaint. After the part is thoroughly cleansed and disinfected by sublimate solutions, a few drops of liq. ferr. perchl. are dropped on the affected spot. The edge of the nail is then gently raised. It is then dried. This is repeated on the second and third day. If suppuration takes place, the hardened scabs are to be removed with forceps, and the ferr. perchl. again applied. The nail soon becomes soft and brittle so that it can be easily removed, and without pain.—*Medical Press and Circular.*

Scarlet Fever.—The value of eucalyptus in destroying the infection of scarlet fever can not be too widely recognized.

A readily prepared antidote for acute arsenical poisoning is the following:

℞	Liquor Ferri Tersulphat	2 ounces.
	Aquae Destillat	2 ounces.
M.		
℞	Magesiae	2½ drachms.
	Aquae Destillat fl	8 ounces.

M. Sig.: Mix the two solutions and give a tablespoonful, diluted, every five minutes, as required.

Pruritus.—Dr Saalfield advises the following formula as an ointment:

℞	Menthol	5 parts.
	Bals. Peru	19 parts.
	Ol. Lanae	200 parts.

M. Sig.: External use.

Roach Destroyers.—Roaches may be exterminated if the following powder is liberally sprinkled in their rendezvous:

Borax	37 parts.
Starch	3 parts.
Cocoa	4 parts.

Mix.

Diabetes Mellitus.-Dr. Radamaker says, in *Louisville Medical News:* The treatment of this disease is twofold. First, to keep the sugar out of the urine, and secondly to keep the patient well nourished. The only medicine I use in the treatment of diabetes is opium, and this is given for the purpose of producing sleep, and also to quench the excessive thirst; besides, it partially controls the excessive secretion of urine.

The balance of the treatment must depend upon the diet. The diet should contain but very little carbo-hydrates, if any; but some patients cannot get along without starch. The diet then must be principally fat and albuminous. To this class belong meat of all descriptions: beef, mutton, veal, pork, fowl, fish, eggs and cream. Of the vegetables, the following may be taken in any quantity: lettuce, spinach, asparagus, young beans, cauliflower, cabbage, cucumbers, and saccharin in place of sugar. Coffee, tea and the astringent wines can also be taken. But everything containing starch or sugar is to be avoided, namely, nuts, bread, potatoes, sweet wines and beer. As bread is an article of diet that most patients cannot do without, I have the following substitute prepared, which has answered all purposes in my practice. Rye or wheat meal is mixed with water and kneaded; the water turns milky owing to the suspension of starch; this water is poured off and fresh water added, and again kneaded. This is continued until all or nearly all of the starch is removed. The remaining dough, which is principally gluten, is then mixed with salt, butter and yeast, and baked. This gluten bread makes an elegant substitute for ordinary bread. If this treatment is continued from four to eight weeks, a cure can be promised in the majority of cases.

Societies.

[Secretaries are requested to keep The Clinic informed of anything of interest in connection with the various societies. Send programmes and minutes of meetings for publication.]

SOCIETY CALENDAR.

Nebraska State Medical Society.—Sessions annual. Next meeting May 13, 1890, at Beatrice. President, J. C. Denise, A. M., M. D., Omaha; Secretaries, M. L. Hildreth, M. D., Lyons, Neb., L. A. Merriam, M. D., Omaha.

Iowa State Medical Society.—Annual meeting at Des Moines, April 16, 1890. President, J. M. Emmert, M. D., Atlantic; Secretaries, C. F. Darnall, M. D., West Union., J. W. Cokenower, M. D., Des Moines.

Missouri Valley Medical.—Sessions Semi-annual. Third Thursday and Friday of September and March. Meeting place, migratory. Dr. J. M. Emmerst, president, Atlantic, Iowa; Dr. James Carter, secretary, Omaha, Neb. Annual meeting in September.

Northern Kansas Medical Society.—Sessions held Semi-annually in November and May. Place of meeting migratory. Dr. Noah Hayes, President, Seneca, Kas.; Dr. William Stranger, secretary, Oxtell, Kas. Annual meeting in May.

Central Kansas District Medical Society.—Sessions quarterly. Meets first Thursday in February, May, August and November. Annual meeting in May. Meeting place migratory. Dr. W. A. Phillips, president, Salina, Kas.; Dr. A. S. M. Anderson, secretary, Salina, Kan.

Missouri State Medical Association.—Session annual. Next meeting May 20, 1890, at Excelsior Springs. President, Dr. L. W. Matthews, Carthage, Mo.; Secretaries, Dr. J. C. Mulhall, St. Louis; Dr. Joseph Sharp, Kansas, City.

Jackson County (Missouri) Medical Society.—Sessions monthly. Second Thursday evening. Always at Kansas City. Annual meeting in October. Dr. A. P. Ormsby, Kansas City, Mo.

Northeastern Kansas Medical Society.—Sessions quarterly. First Thursday in December, March, June and September. Place meeting migratory. Dr. L. Reynolds, Secretary, Horton, Kas.

Reviews.

A Text-Book of Animal Physiology—With introductory chapters on General Biology, and a Full Treatment of Reproduction. For students of Human and Comparative (Veterinary) Medicine and of General Biology. By Wesley Mills, M.A.M.D.L.R.C.P.(Eng.) Professor of Physiology in McGill University and the Veterinary College Montreal. With over five hundred illustration. New York: D. Appleton & Co., 1889.

This book of 700 pages, gotten up in the usual unexceptional manner of the Appletons, should have a large sale. There is no branch of medical science more interesting to the student than physiology. "The proper study of mankind" is so attractive, that the lecturer on this subject always has a full class at our medical colleges, and "paper wads" are for the hour retained in the buccal cavity. The author announces in the preface that this book is an embodiment of his course of lectures as given for the last two years with the highest satisfaction to the students. We are not aware that any systematic work, heretofore, has attempted to teach human physiology by comparison, but the method commends itself to the common sense and experience of every medical man. Since the days of Dunglison, whose storehouse of knowledge was never exhausted, many of the theories of physiology have undergone a change, only such being retained in this work as on more general observation and minute investigation are founded on facts. We cannot go into an analysis of the work. Not only the student (so-called), but the practitioner, who should also always be a student, will find here entertainment far more interesting than the most thrilling novel with which he is wont to wile away the tedious hours of the lying-in-room or divert his weary mind from the hum-drum daily toil and routine practice.

A Treatise on Materia Medica, Pharmacology and Therapeutics—By John V. Shoemaker, A.M. M.D., Professor of Materia Medica, etc., in the Medico-Chirurgical College of Philadelphia, and John Aulde, M.D., Demonstrator of Clinical Medicine, etc., in the Medico-Chirurgical College of Philadelphia. In two volumes. Volume I, devoted to Pharmacy, General Pharmacology and Therapeutics, and Remedial Agents not properly classed with drugs. Published by F. A. Davis, 1231 Filbert street, Philadelphia. Price, cloth, $2.50; sheep $3.25.

This is a well-bound, convenient sized volume 6x9, of 353 pages. In addition, there are blank leaves in large numbers, added for convenience in notation. The arrangement of subjects, and the method of treating them, is so different from ordinary works on Materia Medica that one's interest is elicited from the start. The dry nomenclatures are either ignored, or so attractively presented that the reader is not wearied by them, and is enticed to go further and see what next the authors have to say on this commonly dry subject. In the space allotted us in this review we cannot do this work better justice then by a bare reference to the contents. Part first comprises Materia Medica, Pharmacy, Pharmacology and Therapeutics. Part second comprises Remedies and Remedial Agents used in the treatment of disease not properly classed with drugs. Here we have seventy-two pages devoted to Electro-Therapeutics, and of itself worth more to the general practitioner than the price of the book. Twenty-five pages to Oxygen; twenty-two pages to Hydro-Therapeutics; a number each to Massage, Heat and Cold, Mineral Waters, Metallo-Therapy, Transfusion, Hypnotism, Earth Dressing, Baunscheidtismus, Climatology, Light, Music, Blood-Letting, and Suspension. We heartily commend this work to students and the profession generally.

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Original Articles.

PUERPERAL ECLAMPSIA.[*]

By CHAS. ROSEWATER, M. D., Omaha, Neb.

In selecting the subject of puerperal eclampsia, or puerperal convulsions, as they are ordinarily styled, it was not my intention to go through a detailed history of all that has been written and said on the subject, but rather to give a brief sketch of the views of leading authorities, a history of a few cases which have come more or less directly under my observation, and try to formulate conclusions which will embody in a concise manner the present status of the subject.

Before proceeding to the citation of cases, it would be well to consider what is meant by puerperal eclampsia. Authorities are at a variance regarding this point, some including under its meaning all convulsions occurring during pregnancy, labor or the puerperal state, while others give a somewhat different interpretation of the term. Cazeau and Tarnier in their recent edition, give the following definition:

"It is an affection characterized by a series of fits, in which nearly all the muscles of relation and often also those of organic life are contracted conclusively, and which fits are usually accompanied with or followed by a more or less complete suspension of the sensorial and intellectual faculties for a variable period."

Spiegelberg defined eclampsia as the epileptiform convulsions, that is tonic as well as clonic general convulsions of an epileptiform character, accompanied by unconsciousness and followed by coma, and which occur at some time during the puerperal period, with the latter for their cause.

Fordyce Baker does not attempt to give a definition of puerperal convulsions, but goes into a lengthy description of the phenomena observed, which as a whole constitute what are called puerperal convulsions.

Lusk, probably the best known American authority, gives subtantially the same definition as Spiegelberg, adding, however, that by this definition he intended to exclude the convulsions due to hysteria, epilepsy and cerebral lesions.

Thus practically all agree in defining puerperal eclampsia as including all convulsions occurring during pregnancy or labor or connected therewith, except those of a hysterical, epileptic or apoplectic origin.

It is a fortunate thing for humanity that these convulsions are a comparatively rare occurrence, coming on, as is claimed by Lusk, in about 1 in 500 pregnancies. That these figures are wrong, that they are altogether too high, Lusk's own statements show. He claims that in New York in the eight years from 1867 to 1875, there were 408 deaths from puerperal convulsions—this among 284-000 births. This would make a proportion of about 1:500, but he fails to take into consideration the fact which he sets forth further on, that the death rate from convulsions is about 30 per cent., consequently these deaths represent less than one-third of all the cases which occurred in those eight years, and the rate of occurrence of puerperal convulsions can be set down as about 1 in 175 pregnancies. Whether this error has been corrected in the latest addition of Lusk's work on Midwifery I am not aware, but my statements are based on the edition of 1885.

Having once established the frequency of their occurrence, let us examine and find out what predisposes pregnant women to eclampsia. Albuminuria has been found to be almost always present in such cases, and this coincidence was soon noticed, leading to the theory that eclampsia in the pregnant woman was due entirely to some kidney trouble, and a symptom simply of uræmic poisoning. This theory was taken up and upheld by such men as Frerichs, Braun, Simpson and others.

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[*] Read before the Medical Society of the Missouri Valley, at Sioux City, Iowa, December 19, 1889.

Soon, however, cases were reported of albuminuria in pregnancy without the occurrence of convulsions, as well as of convulsions occurring without the presence of albumen in the urine. The theory of uræmia could not explain all cases, and pathologists began to look in other directions for a cause.

Of them all Traube and Rosenstein were the foremost, and presented views which were soon adopted by the mass of the profession, namely, that it was not a condition of uræmia, but rather one of hydræmia, that the headaches, swelling of limbs, systolic murmur and poor appetite were due to an impoverished condition of the blood, allied to anæmia. The albuminuria was laid down as of secondary importance, the actual onset of the convulsions being supposed to be due to an acute anæmia of the brain brought about by pressure of transuded serum upon the brain substance and blood vessels.

This theory is very plausible and satisfactorily explains a large number of the cases, but not all of them. The fact is that there are several causes producing eclamptic attacks, among which the diminished excretion of urea, the general anæmic condition of the system, a neurotic disposition of the patient are the main ones. In some cases the one cause, in others the other seems to be predominent.

Case I. On April 1st, 1883, at 7 p. m. in Cleveland, Ohio, where I was then practicing, I was called to see Mrs. H. F., a primipara in labor. She was 20 years old, of medium height and inclined to be fleshy. Six weeks previous to above date she had had an attack of diphtheria and for three weeks previous to confinement her limbs had been swollen and she suffered from frequent headaches. She had been in labor four hours when I saw her, and was being attended by a midwife. I was sent for on account of convulsions which set in while the head was passing through the pelvis. On examination I found vertex presenting, os fully dilated, head well down in the pelvic cavity, pain of medium intensity, patient semi-conscious. Shortly after my arrival she went into another fit, about one-half hour after the first one. She would get cyanotic in the face, muscular twitchings about the eyes and mouth, gradually increasing and extending to the muscles of the neck and arms. She would throw her arms about, roll her eyeballs, toss her head from side to side, wildly clinch her teeth and become utterly unconscious. This only lasted a few minutes and then she quieted down. My notes, taken at that time, fail to state the exact position of the head, but finding the os fully dilated, I immediately applied forceps and delivered the woman of a healthy, twelve pound baby. The placenta was delivered by expression (the Crede method) but soon afterwards she went into another convulsion in spite of having received a large dose of chloral and bromide. I now sent for my brother, Dr. M. Rosenwasser, in consultation. Upon his arrival he witnessed another convulsion, and gave a hypodermic of about one and one-half grains of morphia. This soon quieted her and she remained in a stupor for over twenty-four hours, but afterwards made a good recovery.

The urine was drawn by a catheter and examined during the lying-in-state, and albumen in large quantities found, also a few casts.

Five months afterward she informed me that she had had those "fits" frequently since the confinement, and was also still an occasional sufferer from headaches and backache. About two years afterwards she was delivered easily and without complications of another healthy child.

Case II.—Mrs. B. M., at Omaha, Neb., a small Irish lady, well-built and of healthy appearance, sent for me in May, 1889. She was at that time pregnant seven and one-half months. Her husband claimed that she had pains, but as I was sick at home I sent him to Dr. G. When he reached home he found that the supposed pains had quieted down and so he sought no further medical aid.

In June, while calling at Dr. G.'s office, I found Mrs. B. M. there. The doctor was not in and I did not wait until he returned. I was told afterwards that Mrs. B. M. did not wait and did not seek other medical advice.

She had gone to Dr. G. on account of headaches and swollen feet. I met Mr. M. several times after that, but thinking his wife was under Dr. G.'s care, did not warn him (Mr. M.) of the danger approaching.

In the early part of July, 1889, Mrs. M. was taken down with labor pains during the night and, after hurrying after the nurse, Mr. M. went after Dr. G. The latter was engaged at the time, but told Mr. M. to go after me, or at least left word to that effect. When he reached home the nurse protested against my being called on account of my having had facial erysipelas six weeks previous. She recommended Dr. B., who was forthwith called. Dr. B. found head presenting, patient in convulsions. Sent for Dr. B. No. 2 to aid in applying forceps. Meanwhile, the people being quite anxious on account of repeated convulsions, sent after Dr. T. When the latter reached the house he was met at the door by the nurse and informed that the patient was dead; there was no need for his services.

A hypodermic had been administered for the convulsions, but the patient died one-half hour after the birth of her child.

Case III.—Mrs. O., Omaha, Neb., primipara, 31 years old, who has been subject to occasional headaches ever since reaching puberty, engaged me to attend her in childbirth, which event she expected toward the end of September, 1889.

I called on her September 1st, and found the following condition presenting: Small, Swedish woman, with pale face, puffy eyelids, pale lips, coated tongue, bowels constipated, nervous temperament, feet œdematous. Patient complains of almost continuous nausea, headache and backache.

Auscultation reveals a systolic murmur at apex of heart. Otherwise nothing abnormal about heart or lungs. Abdomen not enlarged more than one would expect at this stage of pregnancy. Fœtal heart sounds distinctly audible. Vaginal examination reveals pelvis roomy; nothing else noticeable that is worthy of mention.

Urine is passed in small quantities, highly albuminous, but contains no casts. Assuming this to be a case of hydræmia or anæmia; I prescribed:

℞ Pulv. digital........................gr. viii
Ferri carb..........................ʒss
Ext. nuc. vom.....................gr. viii
Quin. sulph.........................ʒi
Ext. gentian.................. ...q. s. ft. pill xxx
One pill three times a day.

Also ordered patient to take three compound cathartic pills every third night, and make a tea of uva ursi leaves, to be used through the day as a diuretic.

In about two weeks the œdema disappeared, the headaches subsided, appetite returned, and patient was able to rest much better through the night. The urine also contained much less albumen and was passed in larger quantities. I warned the husband of the danger ahead, and told him to report to me from time to time as to patient's condition.

I did not hear from him again until October 14th, at 1 P. M., when I was sent for.

Patient claimed that pains had begun at 6 A. M., and came on at various intervals, sometimes in rapid succession, and again letting up for quite a stretch of time. I found child lying with head on right brim of pelvis. Through the slightly opened os I could feel a small, string-like body corresponding in size, and feel to the funis. No pulsations could be felt in this supposed funis, but the fœtal heart-sounds were distinctly audible in the left iliac region. Bowels moved this morning. Patient complains of slight headache. Feet not swollen. I directed patient to lie inclined slightly toward the left side, to favor engagement of the head in the superior straight. Also had the carpets removed from the room, floor cleaned, bedding changed entirely, and sprinkled with 5 per cent. solution of carbolic acid. Ordered the digitalis and iron pills to be continued.

4 P. M.—Os completely closed. No pains. Head over pelvic entrance, but still movable. Labor did not set in on that day.

October 22d.—Was called at 3 A. M. on account of convulsions. Her condition previous to my arrival was described as follows: She became very restless and nervous, and attempted to get out of bed, but after slight muscular twitchings fell down in spasms, during which the thumbs were held within the closed fist, the tongue was protruded, the eyeballs rolled about, and patient became blue in the face and unconscious. These convulsions occurred twice before my arrival, and during one of them the husband had to push the tongue back into the mouth to prevent its being bitten.

At the time of my arrival the os was of the size of a silver five-cent piece. Pains few and far between, and apparently ineffective.

4 P. M.—I found os fully dilated, head low down in pelvis, pains frequent and hard, child was born without further trouble at 5:30 P. M., the passage of the shoulders causing quite a tear in the perineum. Following the birth of the child the uterus failed to contract properly, severe hemorrhage ensued and I was compelled to remove the placenta by introduction of my hand into the uterus. I then gave fluid extract ergot and prepared to sew up the perineum.

While the second stitch was being passed patient went into a convulsion, a characteristic puerperal convulsion as described in connection with one of the previous cases. The patient was soon quieted by inhalations of chloroform and then an enema containing 30 grains of chloral and 30 of bromide of soda was given. She fell into a natural sleep and awoke toward morning feeling somewhat dazed and without any recollection of what had happened.

Proper antiseptic precautions having been pursued all through the management of the case, the patient from this time on made a rapid and complete recovery with an entirely afebrile course.

I saw her on December 18 and was informed that she had had no further trouble since and has been abundantly able to nurse her child.

That this last case might have taken a much less favorable course if not carefully watched, is evident from the sad result in Case No. 2. There is no doubt in this case that the attending physicians pursued the right and only course open to them, and that the death was directly attributable to the inattention bestowed by the patient and her husband upon the symptoms which presented themselves as much as six weeks previous to the termination of pregnancy. Had attention been bestowed upon these symptoms, had she put herself under treatment as she ought to have done, she might still be among the living.

The treatment of puerperal eclampsia may properly be resolved into two distinct sections—the preventative and the curative. As the tendency toward accumulation of effete material, especially urea, in the blood, an impoverished condition of the latter, an inactivity of the excretory functions and a peculiar sensitiveness of the nervous system are the main predisposing causes of puerperal convulsions, all those measures which tend to correct these various morbid conditions are the proper means to be used in preventing the onset of eclampsia. Diuretics, diaphoretics and cathartics to eliminate the uric acid held back by insufficient action of the kidneys; tonics to improve the appetite and the condition of the blood and rest and quiet together with nervines occasionally to diminish the sensibility of the nervous system, are all the measures properly coming under the head of the preventative treatment. In some instances the one system of organs wants more attention, in others the other, and these slight modifications must suggest themselves to every well-posted practitioner of medicine.

As will be seen by a glance at the cases cited, it is of importance to see the prospective mother from time to time during the pregnancy, and check in their incipiency any derangements which might occur. The urine should be examined from time to time so as to guard against any albuminuria that may be present. In this way derangements which might have ultimately lead to serious complications, may be averted by timely treatment. The preventative treatment must aim at putting the patient in the best physical and mental condition possible for her safe conduct through childbirth.

The curative treatment, or in other words the measures to be resorted to, when eclampsia once sets in, is a great field for disput among leading authorities, such as Cazea Lusk, Fordyce Barker, Kleinwachter an others. In the main there are three lines treatment laid down, and as each seems to have been followed by equal results, it is to be presumed that they are equally effective. But inasmuch as neither has brought down the percentage of mortality from puerperal eclampsia appreciably, it seems that there is still room for improvement, and that the right method of treating this dreaded complication of childbirth is still unknown. The one line of treatment, representing the views of Cazeau, Fordyce Barker and others, especially of the older authorities, is venesection. "Bleed the patient freely," says Cazeau, "drawing from 14 ozs. upwards. If the first venesection of 14 ozs. makes no impression, wait two or three hours and draw again an equal quantity, and if this is of no avail, and you have to deal with a plethoric patient, another pint of blood may be drawn." Cazean seems to have great faith in this procedure and pronounces it decidedly the best. Simultaneous with the venesection he advises the administration of cathartics and diaphoretics, castor oil 1 to 3 oz., or still better, calomel 2 grs. every quarter hour until it purges. If the patient cannot swallow, give purgative enemata. Cazeau disapproves of the use of opiates and anaesthetics, and will only allow of their use after his favorite remedies have proven unavailing.

Lusk and Kleinwachter stand directly opposed to Cazeau in their views, the latter more so than the former, for, while Lusk allows of the use of venesection, followed by narcotics and anaesthetics, Kleinwachter claims that venesection is at best only a measure to relieve the existing convulsions, but tending to favor their earlier return and only weaken the patient, thus diminishing her chances for ultimate recovery.

After venesection or independent of it, chloroform and morphia seem to be the most useful agents in allaying convulsions and preventing their return. Chloroform should only be inhaled in sufficient quantities to allay the existing convulsions and then a hypodermic of one-sixth to one-half grain of morphia should be given. After beginning with the inhalation of chloroform an anema containing 30 grains each of chloral hydrate and bromide of potassim are given, the anæsthetic being suspended as soon as the effect of these remedies has set in. (Lusk.)

Lusk as much as condems the use of chloroform and venesection as remedies for convulsions *post partum* in the following language: "Chloroform and venesection should be employed with extreme caution, if indeed they are ever entitled to confidence at that time."

He relies mainly on the use of opium, chloral, veratrum viride or digitalis, as the special case may indicate.

Numerous other methods of treatment have been devised, as indeed is the case in all diseases still so unfavorable in their results.

Jenks claims to have had brilliant results from the use of nitrite of amyl.

Pilocarpin also has its advocates, having been used apparently with great success in a certain number of cases. It should, however, be used very cautiously, as fatal results have followed its use under such circumstances as to make it appear as though the pilocarpin were the cause of death. (Eulenburg.)

Kleinwachter recommends that it be used only in the beginning of convulsions.

As has been said before, while there are numerous methods of treatment and numerous remedies, each of which has its ardent supporters, the latter have failed to reduce the mortality from puerperal eclampsia appreciable, and until this has been done it may reasonably be doubted whether we are in the right at present in our views as to the pathology and treatment of this disease.

THE DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE SPINAL CORD.*

By CLARKE GAPEN, M. D., Omaha, Neb.

The special reason I offer for producing a paper upon this subject is the following:

There has, in the past year or two, come much into vogue, a method of treatment of locomotor atasia, known as extension. I do not need to stop to describe it or to comment upon it further than to say that some remarkable results seem to have been obtained by its use. The foremost neurologist in the country, as well as the country practitioner, is using and praising it. Now, while this method of treatment seems to be exceedingly effective for good in some cases of posterior spinal sclerosis it is equally effective for harm in some other pathological conditions of the nerves and cord. Hence, the importance of a correct diagnosis. I have myself seen in the past half-year at least three cases of disease of the cord in which mistake had been made and in one of them there had been considerable damage done by extension.

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*Read before the Medical Society of the Missouri Valley, at Sioux City, Iowa, Dec. 19, 1889.

The conditions to be differentiated are:

1. SPINAL SCLEROSIS—pathologically an increase in the connective tissue elements of the cord by which the nerve elements are unduly compressed or squeezed out of existence or activity.

2. MYELITIS—or a condition of inflammation, acute or chronic, of the substance of the cord.

3. NEURITIS—or inflammation of the nerves.

Our first consideration is with regard to posterior spinal sclerosis. If we are correct in our diagnosis of this affection we may proceed to extension with hope of benefit and practically without fear of injury.

The first and most important symptom to guide us here is *inco-ordination*. As this gives name, it also gives character to the disease and should be closely looked for. It is said to exist in 100 per cent. of the cases. At first it exists only in a slight degree and may be appreciable only when the eyes are covered or withdrawn. The first observation may be made by the patient himself while washing his face—when his eyes are covered with his hands he may be conscious of a sensation of unsteadiness—or it may be that when he rises in the dark he may first discover this important symptom. He may not, however, have discovered it himself, and you may do so perhaps by asking him to button his coat, pick up some small object, or touch the end of his nose when his eyes are closed. If watched narrowly you may be able to detect his inability to perform these acts steadily and with the usual precision. It is in the early stages of the disease that difficulty of diagnosis exists. In the later stages none, practically. He will then be unable to stand when his feet are close together or when his eyes are closed, or if the feet are bared you will see the peculiar movements of the tendons associated with the oscillations of the body. When the disease is more advanced you will readily discover his uncertainty of locomotion with full visual guidance and the marked and peculiar alterations in gait that characterize the disease. Turning quickly or walking backwards he may fall or incline to fall. Attempting to touch an object with the hand he falls short of it or goes beyond it, and you will notice the effort of attention required to enable him to settle the hand down upon the object.

All the muscles of the body may be affected, but usually the head, face, eyes and tongue escape. One particularity is especially to be noted, viz: that while there is loss of *utility* of the parts affected, there is no loss of *power*. To illustrate, the patient may not kick as accurately as before, but he can kick as vigorously. To this he will often call attention. When the anterior columns are affected this is quite otherwise. *Pain* of the peculiar "lightning" character nearly always characterizes the early stages of Loc. Ataxia. This is one of the commonest, earliest symptoms. It may affect arms, legs, trunk, head and is paroxgenial in character; varies in duration from hours to days; does not follow the nerves as in neuralgia or neuritis; may be followed by echymosis; hair of parts turning gray and beaking off. Instead of the ordinary lancinating or lightning pains, the sensations may be of burning, tearing, gnawing, tingling, creeping, pins and needles sense of construction, etc. Sensation may be increased, diminished or perverted. As illustrating the latter, a prick may give the sensation of heat. There is also generally a *retardation of sensation*. This occurs in 90 per cent of the cases. Sensation may be retarded seven to fifteen seconds, and a part of the sensation may be retarded more than another part. For example, the touch may be felt at once, the pain later. There may also be after pain, that is, a second wave of painful sensation following the first by one-fourth to one-half second. A prick on one leg may be felt as if on the other, or it may be felt in many places. There may be insensibility of deeper tissues. Burns and pleurisy may be painless. The sense of posture may be lost and the patient must look before he can tell where his legs are. All these abnormalities in sensation, of course, are due to the invasion of the posterior or sensory part of the cord.

Another early and constant symptom is the *loss of the knee jerk*. It exists in 98 per cent. of cases—often precedes the inco-ordination. The sexual power is also usually lost. The pupil is usually small and the reaction of the iris to light lost in 90 per cent. of cases; diplopia is also common. In the later stages peristalsis is diminished, the bowels being constipated and the bladder showing retention or incontinence. Toward the end trophic disturbances set in, such as perforating ulcer, Charcot's disease of the bones, hair falls, ecchymoses occur. The visceral crises usually end the picture, and may consist of pain in almost any of the viscera, disturbance of the heart's action, vomiting, dyspepsia, spasm, etc. More rarely there are mental disturbances.

I have given this brief picture of posterior spinal sclerosis that we may have a basis for our differentiation. The differential diagnosis is to be made almost as much by exclusion as by the presence of symptoms.

Myelitis is to be differentiated broadly by its being an inflammatory and degenerative disease of the cord, and therefore the development of symptoms, especially in acute cases, more rapid than in sclerosis. The first and most obtrusive symptom, after the prodromic chill or convulsion, is a *marked motor weakness*. When we recall the fact that in sclerosis the strength is not lost, at any rate, not until very late in the disease, we see the value of this symptom. The onset in myelitis is usually characterized by cramps or spasmodic twitchings, none of which obtain in sclerosis. Motor paralysis often, in acute cases, is complete in a few hours. Sensation is also generally impaired at once. Both may be lost to the level of the lesion. At this point there is frequently a girdle pain. The reflexes are often lost, but if lesion is above the lumbar enlargement it quickly returns, often in a few hours. It never returns in locomotor ataxia. If the lumbar enlargement is involved in myelitis all forms of reflex action are lost. The muscles are at first flabby and toneless, but soon regain their tone if the lumbar enlargement is not involved.

There is rapid wasting. This is to be noted in contrast with Post Sp. Sclerosis—in which little or no wasting occurs—wasting being associated only with diseases of the anterior or motor parts of the cord. But it is in cases of chronic myelitis that we find differentiation most difficult. Almost every symptom that marks any other disease of the cord may appear in this except acute spasm, which occurs only in acute diseases of the anterior or laterior columns. Severe pain, however, is not common. The motor symptoms are generally paraplegic, and *power* is lost rather than *sensibility*. The onset of weakness is very gradual. The patient may observe at first only that he gets tired quicker than usual, but gradually this increasing weakness forces itself on his notice.

This contrasts markedly with the persistence of strength in ataxia. But there is still a more marked difference. In chronic myelitis, as the weakness increases, an excess of reflex action develops. The knee jerk increases instead of being lost, and foot clonus, a reflex which is pathological, can be obtained rapidly.

The course in chronic myelitis is usually slow and progressive—in this resembling ataxia—and consists of a gradual increase in the prominent symptoms which I have named.

The second and most important differentiation is from *multiple alcoholic neuritis*, an affection so like tabes dorsalis that one variety of it has been named "Pseudo-Tabes." Pathologically it is a neuritis, and not in any sense an affection of the spinal cord.

Let us pause for an instant on this word neuritis. I do so especially for the reason that in a recent conversation with an old practitioner I found he had no conception of the meaning of the term as used in this connection. To him the word meant only an inflammation of the sheath of the nerve. There are probably among us few, if any, who so limit its meaning.

In this connection is meant an inflammation of the nerve itself and a degeneration of the nerve fibres. The brain and cord are ready to do their work, but the conduction of the nerve is lost and the function thereby more or less completely suppressed.

Multiple neuritis is characterized by a motor palsy, the musculo-spiral and anterior tibial nerves being especially subject to this form of degeneration, causing the "wrist drop" and "foot drop," which generally characterize it. The onset is acute or subacute and is generally marked by rigor and a temperature of 103 or 104 F. Sensations of pins and needles and vague rheumatoid pains suggest and often mislead the diagnostician. If carefully looked for there will be found also tenderness of the nerve trunks.

The palsy may affect all the muscles and even extend to those of the face, trunk, diaphragm and heart, in which respect it is dissimilar to Alaxia. The muscles also waste and become flabby; here again it is unlike Ataxia. But the fact that the reflexes are lost early constitutes a most misleading symptom. Inco-ordination also sometimes exists. The pupils, however, remain unaffected and there is also a history of alcoholism. The most difficult differentiation, however, is in a variety of this disease in which there coexists (1) slight weakness, (2) little tenderness of nerve trunks, (3) and inco-ordination is conspicuous. Where these three conditions coexist, a differential diagnois is exceedingly difficult and as important as difficult, for the reason that in these cases of degenerative inflammation of nerve trunks absolute rest is par excellence the remedy, and the worst possible treatment is extension.

Having briefly outlined the differential diagnosis of sclerotic degeneration of the posterior columns of the cord (post. spinal sclerosis), inflammatory degeneration of the cord (or myelitis), and parenchematous inflammation of the nerve trunks (or multiple neuritis), I will still more briefly glance at the differentiation of some of the other varieties of spinal disease, most of which are varieties of sclerosis. But first, one or two that are not.

In General Paralysis of the Insane—the spinal symptoms may at first be so exactly like locomotor ataxia as to make the distinction absolutely impossible, but the paresis and the mental symptoms, delusions of grandeur, etc., soon come to the relief of the diagnostician.

In Paraplegia—the marked and early loss of power which characterizes it (there being none, or, if any, very late in ataxia) the persistence of the knee jerk it even being excessive in many cases and the absence of ankle clonus makes diagnosis comparatively easy here.

In Ataxic Paraplegia—we find diagnosis not difficult and less important because extension is here useful as well as in posterior sclerosis. In this the posterior and lateral columns are both sclerotic. Ataxic paraplegia is spastic paraplegia plus inco-ordination.

The knee jerk is usually excessive and foot clonus present.

The lightning pains are absent.

Spasm follows rapidly upon inco-ordination owing to the involvement of the lateral columns and giving to the patient the peculiar gait of spastic paraplegia.

It is like posterior sclerosis in inco-ordination being present, in the onset being slow, in the legs being usually first affected, in the sexual powers being impaired, in the sphincters being involved.

But it is unlike posterior spinal sclerosis in the fact that weakness goes with the inco-ordination or follows it very rapidly, in the absence of girdle pains, in the fact that the pupil usually reacts normally and the face muscles are liable to involvement. But most of all it is unlike posterior spinal sclerosis in the fact that as the case advances the spasm and paralysis comes more and more to the front and the inco-ordination sinks more and more into the background. While in pure ataxia the inco-ordination grows more prominent, while the loss of power is almost *nil* and there is no spasm.

A very common error is the mistaking of spinal disease in its earlier stages for rheumatism or sciatica. I was recently consulted by a lady who had had five years' of treatment for rheumatism. She first showed me her ankles which were swollen and bore apparently conclusive evidences of being rheumatic. On examining the right ankle more closely I found it somewhat fixed and the fixity due to a contraction of the flexor tendons. Searching further I found similar contractions of flexor tendons and of much more marked character in the muscles of the right arm and the same conditions prevailed somewhat in other muscles. Still further pursuing this neurotic clew I found that the patient had, within a few months, began to have epileptic seizures. In short, here was a condition which for five years had been hastily and roughly diagnosed rheumatism which was, in fact, due to changes in the brain and cord. I will not say the rheumatism was wholly absent, but the neurosis was distinctly present.

We have all doubtless seen cases of spinal disease which at first were called rheumatism or lumbago or sciatica. I will not take up your time with this differentiation, except to say that every case of lumbago, sciatica or muscular rheumatism should be regarded with suspicion. For it is in the earlier stages of spinal diseases that curability exists.

IN DIPHTHERITIC PARALYSIS—there is in rare cases such inco-ordination and loss of knee-jerk as may excite suspicion at first of sclerosis, but the inco-ordination is always plus weakness of muscles and is preceded by paralysis of the palate and of accommodation. Then the precedent history of diphtheria and the fact that true tabes never follows diphtheria, help us out.

IN CEREBELLAR TUMOR—there is a marked unsteadiness which may amount to inco-ordination, but there is no loss of knee-jerk, no anæsthesia, no lightning pains and occipital headache is practically an invariable symptom.

IN POLIO MYELITIS—a degeneration of the gray matter—the cells—not the fibres, of the cord, the distinction is easy by the existence of associated weakness and marked wasting. In acute cases paralysis quickly develops—the wasting is later. In chronic cases, however, they may come together. Again this is largely a child's disease, the proportion to adults being as six to one.

In conclusion I would say that the increasing prevalence of spinal disease and the fact that it is only in the earlier stages that any curability exists in these affections should lead us to be always on the alert and seek early the manifestations of disease.

BACILLI TUBERCULOSIS—THEIR ETIOLOGICAL ROLE IN SURGICAL AFFECTIONS.*

By W. JEPSON, M. D., Sioux City, Iowa.

I shall only attempt in this paper to briefly give a resume of our present knowledge of the etiological role which the bacillus of tubercle plays in a number of affections which, by common consent, are regarded as coming within the domain of surgery and requiring surgical treatment for their alleviation.

Of all the microbic diseases, tuberculosis is of the greatest importance to the surgeon, of the utmost interest owing to their frequency, and because the tubercular lesions which come under his observation are more clearly understood from a scientific standpoint than most of the other surgical affections.

It is but a few years ago since the forms of tuberculosis to which allusion will be made in this paper were incorrectly understood, and consequently a rational surgical treatment was out of the question. Most all of the localized tubercular processes were included under the general term of scrofula, and were looked upon as a local manifestation of a general dyscrasia, and treated in accordance with this view of their pathology. The discovery of the bacilli tuberculosis has rendered the word scrofula obsolete, and has assigned to tubercular processes in the various organs and tissues of the body their true etiological and pathological significance and paved the way for their successful surgical treatment. Our profession has truly cause to feel highly elated over the scientific achievements made in the last decade. I believe we can say with truthfulness that in no special field of our science has greater energy been employed, and with more gratifying results, than in the field of bacteriology. It has lifted the veil obscuring the etiology and pathology of many affections before imperfectly understood. The same application in the future bids fair to be rewarded with achievements even greater, and one by one the dreaded affections will have their "cause" placed before our scrutiny, from which deductions as to rational treatment will be made.

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*Read at a meeting of the Medical Society of the Missouri Valley, at Sioux City, Iowa, December 19, 1889.

Long before the period from which dates our positive knowledge regarding the cause of tuberculosis under its varied phases, much diligent search had been made to discover and isolate a specific organism which should be characteristic of this disease; but nothing definite was known on the subject until Robert Koch in 1882 announced to the profession the result of his arduous labors. He found and demonstrated the true cause of tuberculosis—the bacillus of tuberculosis, and his first publication brought such convincing proof of the correctness of his claim that with few exceptions it brought conviction to the most skeptical. He had not only found the bacillus, but found it to be present in all tubercular lesions, and capable of producing typical tuberculosis when introduced into the tissues or circulation of an animal not inured to this disease.

I shall forego all description of the bacillus tuberculosis excepting such of its biological history as will affect it as a pathogenic germ. The bacillus is rod-shaped, rounded at the ends, and from two to eight millimeters in length. Method of propagation is by spore formation, which even takes place in the animal body. They have no power of motion—are non-motile. Growth only takes place between the temperature of 86° to 105:8° F.; greatest activity at 98:6° to 100:4°. Their growth is very slow, and is destroyed by other germs among which are pyogenic. Infection takes place either by the bacillus from without being deposited on some solution of continuity, either cutaneous or mucus surface, on finding a resting place in some undisturbed suitable soil, as occluded pulmonary vessels or lobules. In either case we would have direct primary infection through the pathological changes which would take place through their presence; erosions ofcapillaries would in course oftime take place, and would offer a favorable entrance atrium for them to the general circulation, either as bacilli or through the medium of migrating or granulating cells, and their lodgement at some distant point and the occurrence of secondary infection.

The same would be true if their entrance into lymphatics, after having passed all the L. glands along the current, the bacillus not finding a suitable soil or not being sufficiently long retained at point of reception, may find its way into the general circulation or lymphatic current and again be carried to some distant field of the body and become lodged in sites either anatomically predisposed or prepared by proper pathological changes for their reception and development. In this way we localize tuberculosis. But we must not lose sight of the fact that their procuring access to the circulating medium of the body does not necessarily imply that they will be so fortunate as to find a resting place in proper soil, as they may become destroyed and eliminated as other foreign material.

The localized tubercular processes amenable to successful surgical treatment of which I shall speak are: first, tuberculosis of the bones; second, of joints and tendon sheaths; third, of genital organs; fourth, of cutaneous tissue or lupus; fifth, of primary infection of lymphatics or scrofula.

The localization of the bacilli of tubercle in bones is an exceedingly frequent affection in children and young adults. Its favorite site being in the epiphyseal extremities of long bones, although the short bones of carpus and tarsus may become affected as well as some of the irregular bones.

Direct infection, we may say, is never of several and when the disease has made its appearance it is only evidence of the existence of tubercular infection at an earlier date, or the presence of the bacilli in some other location, when deposited by more direct infection.

When the bacilli are present in the blood current of young persons we very often find their localization taking near the epiphyseal cartilage, by their becoming arrested in one of the terminal branches of an artery, either by the artery obliberated by an embolus or granulation tissue containing bacillus or the lumen of the vessel is gradually diminished by the formation of a neural thrombus which forms around the bacilli implanted upon the vessel wall, which thrombus finally completely obliterates the vessel.

The new vessel in the vicinity of the center of growth and ossification in bones of young persons on account of their imperfect structure and irregular contour furnish the most favorable conditions for the arrest of floating granules, matter and pathogenic microbes. This predisposing anatomical condition goes far to explain the frequency with which we meet with tuberculosis in the epiphyseal extremities of long bones. As soon as implantation occurs in the vessel, a process siculicification around the tubercular thrombus, and the preexisting connection tissue, is transformed into embryo or granulation tissue; which imparts to the granulations of the specific imflammation its characteristic fungoid appearance.

The granulation tissue in bones undergoes the same secondary degenerative tissue changes as in lymphatics. In advance cases we may expect to meet with Caseatious Liquefaction of the caseous materials and separation of secondary infection with pyogenic microbes should occur, while the synovial membranes become more susceptible. Tuberculosis in joints is so clearly related to the same affection in bone that it often follows the latter, and when it does appear as a primary lesion, it frequently extends to the adjacent bones. As before stated, from anatomical reasons, it occurs most in adults as a primary lesion.

The localization in an intact joint, as in bone, presupposes the entrance of the bacilli through the same channel from some preexisting tubercular foci. The pathological changes produced by their presence here is similar to that observed in bone or other tissue, with the exception that their extension to contiguous parts of the membrane is more rapid, as a single tubercular nodule will, in a comparatively short time lead to their diffusion over the entire synovial surface, in which the movement of the joints plays an important part.

It is the tubercular nodules or granulation tissue which has given this form of arthritis the name of fungoid synovitis and synovitis hyperpla-granuloso. That the form of arthritis is a genuine tubercle, has been abundantly illustrated by clinical experience and microscopical examinations, and particularly the results obtained from implantation experiments in animals.

Tuberculosis of tendon sheaths as a primary affection is rare, but of sufficient frequency to place us on our guard, while as a concomitant of the same affection in joints, it is frequent.

Tuberculosis of the genital organs of women is of rare occurrence, while in the male it is frequent, and as a primary lesion is most often within the epididymis, for the reason that the vessels in this structure are more tortuous than in the remaining portion of the testicle, or the vas deferens. These anatomical conditions again become important factors in the localization of floating bacilli. That in tuberculosis of the testicle, as in the affections alluded to, we are only dealing with a manifestation of an antecedent infection becomes apparent by the clinical observation that both testicles are often either inoculated simultaneously, or with only short periods intervening.

The infection generally extends by continuity of structure involving the epididymis, the large portion of the testicle extending along the vas deferens to the vesiculæ seminales, the prostate gland and bladder, and from this along the ureter to the pelvis of the kidney.

That in these affections we have to deal with an infectious focus becomes apparent, and our aid should not be too long withheld, for reasons already given, and the same as are held forth for early operations in malignant growths.

Gentlemen, in closing my paper I will call your attention to two forms of localized tuberculosis, lupus and scrofulus, which, until within a few years, have not been so considered.

Tuberculosis of the cutaneous surface or lupus: The long debate which has been carried on for years as to the identity or non-identity of lupus and tuberculosis has apparently terminated in favor of those who argued in favor of their identity. We find that Friedlander, in an article in 1881, was the first to take a positive stand and claim that lupus is a tuberculosis of the skin, and showed its histological identity with other recognized forms of local tuberculosis and that the nodules were composed of giant and epithelial cells, the same as tubercle of the lungs. This, we observe, was a year before Koch brought to light ocular proof of their identity by showing the ever-presence of the bacilli. The advances in our knowledge of the etiology of tuberculosis, the discovery of its cause and the production in animals of tuberculosis by implantation of lupus tissue, has finally settled beyond question the fact that lupus is a localized tuberculosis of the skin. Infection is generally direct, through some solution of continuity, and for this reason we most often find it occurring in parts of the body most exposed, viz: the face and neck.

Let me formulate the reasons we have for believing in their identity:

1. Their similarity of histological structures.
2. The presence of the bacillus of tubercle in the granulation tissue of lupus.
3. The production of typical tuberculosis in animals not inured to this disease by implantation of lupus tissue or inoculation with a pure culture of bacilli obtained from lupus tissue.
4. The fact that patients suffering from lupus are frequently attacked by and die of tuberculosis of other organs.

Tuberculosis of the lymphatics or scrofula: As the lymphatic glands are simply filters of the different currents of lymph, we would naturally suppose the glands to be frequently affected, as they would arrest any introduction of microbes into the inter-cellular lymph spaces, and such we find to be clinically as well as theoretically true, especially such glands as are situated in course of lymph currents from parts most subject to loss of continuity and exposed—as face, neck and scalp—through the abrasions may be furnished the necessary entrance atrium of the bacillus. So we find accordingly that 95 per cent. of primary tuberculosis of lymphatic glands involve those of the neck. The pathological changes which are produced in the interior of a gland by the presence of pathogenic germs are well calculated for the time being, at least, to limit the infection. The lymph adenitis which occurs, blocks the lymph spaces with the product of the specific inflammation which temporarily, at least, fixes the bacilli in their location. The usual course of infection is in direction of lymph current and along chain of glands in which primary infection occurred.

Gland after gland in the course of lymph channel is generally successively invaded until the whole chain is implicated. As long as infection has not extended along the whole length of chain the patient is protected against systemic infection, but when the bacilli have passed the last of the filters and entered the general circulation through thoracic duct the dangers of the occurrence of miliary tuberculosis is exceedingly great.

Correspondence.

OAKLAND, Burt Co., Neb., March 6, '90.

Editors Omaha Clinic:

I was called on the 5th inst. to treat August Monnich, one of our well-to-do farmers, and found patient laboring under a narcotic or opium poisoning, the result of his having taken the contents of a 25c bottle of Piso's Consumption Cure, in less than a day. I administered the Belladonna and ammonia treatment and brought him out all right. I am, Very respectfully,

DR. T. W. LEEPER.

[Piso's Consumption Cure contains about one grain of sulph. morphine to two ounces of the mixture.—EDITOR.]

GRAND ISLAND, Neb., March 13, '90.

Editors Omaha Clinic:

Yours of 11th inst. received. You ask, "Are we to understand that only those patients with diphtheria, who took iodide of sodium, died, with a fatality of 25 per cent., while 400 who did not take the iodide of sodium got well?" I answer, such was the case. You then ask, "if so, how can you explain the remarkable fact?" In response, I must confess I had not thought of it as a remarkable fact, hence I will give you a few statements and allow you to draw your own inferences.

1st. The patients treated with iodide of sodium, (viz. 100) were the first treated by me during the epidemic, these cases occurred in twenty-four families, the surroundings in some of them were not always the best in regard to house room, etc., and sanitary precautions.

2nd. In most of them I was called after the cases were well developed, and the iodide of sodium being a slow remedy would not have as good a chance of success as when used in the first onset of the disease.

3rd. The deaths occurred in patients from infancy to eight years old.

4th. It was impossible in the early times of the epidemic to have as perfect a system of attendant nurses as it was later in the epidemic.

Now for the later 400 cases:

1st. They all occurred in families where I had their fullest confidence. I had been their family physician for ten years; part of the time in this state, the remainder in Illinois.

2nd. I was called early in the disease.

3rd. The houses were roomy and every facility was at hand needed, and a perfect system of nurses or attendants was procured, and assisted me in the 160 families.

4th. The patients saw no one but parents and nurses.

5th. The ages of patients were from three to eighteen years. Lastly, I had become disgusted with iodide of sodium and dropped it from my list, using the other before mentioned instead, when indicated.

Respectfully,
C. T. Poe, M. D.

Chester, Neb, Feb. 13, 1890.
Editors Omaha Clinic:

In reference to the use of iodide of sodium, I will report the following: On January 10th I prescribed it in 4 gr. doses every two hours for a child aged three years, who had an attack of membranous croup. Unfortunately the medicine was not administered as directed until after my next visit, on the 11th, at which time I insisted upon it being given regularly. On the morning of the 12th, at about 7 A. M., the little patient threw off almost a perfect membranous cast of the larynx, very tough in character. Her breathing was perfectly natural for about five hours, when the membrane began to form again, and the little sufferer succumbed to the disease at about 2 A. M. on the morning of the 13th. My experience with membranous and diphtheritic croup has been very unfortunate. Out of over fifteen cases treated during the past nine years only two have recovered. What the result would have been in the last case had the iodide of sodium been given as directed, I am unable to say. But in view of the fact that it was the only case that I have seen in which the false membrane was loosened and thrown off in its entirety, I shall certainly prescribe it again when occasion offers, as I have more faith in it than in any other remedy I have ever used.

Yours very truly,
J. C. Mosshart.

CREASOTE IN THE TREATMENT OF CHRONIC GONORRHŒA.

Dr. Breima recommends in the *Riforma Medica* the following injection for chronic gonorrhœa:

℞.	Creasote	10 minims
	Fl. extr. of hamamelis Fl. extr. hydrastis canadensis	of each 15 minims
	Rose water	4 ounces

M.

This should be slightly diluted with warm water before using.—*Ibid.*

ECZEMA.

Dr. Mackintosh gives the following as an ointment which, in most cases, pretty nearly approaches the character of a specific:

℞	Bismuthi subnitratis	4 drachms
	Zinc oxidi	1 drachm
	Acid carbolic liquidi	½ drachm
	Vaselini Albi	2 ounces

Ft. ung.

Or,

℞	Bismuthi subnitratis	2 drachms
	Zinci oxidi	½ drachm
	Glycerini (Price's)	1½ drachms
	Acidi carbolici liquidi	20 minims
	Vaselini albi	6 drachms

Ft. ung.

The latter ointment mixes into a beautiful enamel-like cream, which is cooling, and acts as a balm to the irritable skin. When constant tingling and irritation disturb the patient's rest at night, the following lotion is said to be valuable:

℞	Bismuthi subnitratis	1 drachm
	Glycerini (Price's)	4 drachms
	Acidi carbolici liquidi	12 minims
	Aquæ rosæ, ad	1 ounce

M. Sig.: Shake up and apply with a camel's-hair pencil.

THE OMAHA CLINIC.

THE EDITOR would be pleased to receive original articles, communications, news items, society proceedings, or any items of general interest to the Profession.

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OMAHA, MARCH, 1890.

HEREDITY.

In papers read before the Lancaster County Medical Society and before the Nebraska State Medical Society, in the years from 1876 to 1879, bearing on the physiology of generation and sex production, we took the, at that time rather advanced, therefore speculative position, that the spermatozoa were the only types of *generatio æquivoca*, or spontaneous generation; that the *remains* of the union of the spermatoon or *zoa* with the germinal vesicle of the ovum not used in the formation of the resultant *asexual* animal, were deposited upon the Wolfian body of the same, the presence of which surplus—*a germinal leven*—furnishes a stimulus for excessive growth upon the Wolfian body and the resultant—*an ovary*—and the asexual animal changed into a sexually differentiated one — a female; that all transmission of body peculiarities is by atavisuo, i. e., the grandfather upon the mother's side furnishes part and the father the other part of the characters, which distinguish the offspring; that the mother has no influence upon these characters, except in so far as the nutrition and environment which she furnishes influence the development of the characters of the offspring.

The brothers *Hertwig* have shown that the egg of the seaurchire (*Echinus*) when shaken in a test tube, will fall to pieces, some of which contain the nucleus or germ vesicle, whilst others represent simply the protoplasm of the cells.

Lately *Boveri* has shown that the union of the spermatozoon with the fragments containing no nucleus gives rise to *larvæ* of the same character as those brought forth by the union of the spermatozoon with a complete egg, i. e., one from which the germinal vesicle has not been removed.

The male pronucleus, therefore, possesses all the necessary elements to act as the first segmentation sphere or *blasto sphere*. A fertilization, therefore, of a fragment of the egg of spær-echinus, which does not contain its nucleus (the female pronucleus), with the sperma of echinus, must show in its resulting larva the characters of the pure echinus type in case the necleus is the sole carrier of the parental characters. The true bastards of nucleated eggs of spear-echinus and the sperma of echinus represent in form and skeleton an intermediate creature standing between both parents; whilst those larvæ, which take their origin from the non-nucleated pieces of egg proto-plasm of the spær-echinus and the sperma of echinus present the same qualities as those produced from the egg and sperma of the echinus, except that the offspring and all its progeny are very much smaller.

The bastard larvæ produced from the non-nucleated eggs and sperms present, therefore, all the characteristics of the paternal species. This demonstrates the role of the nucleus as the tool of heredity. With the removal of the female pronucleus all means for the transmission of characters of the mother are entirely lost. The maternal protoplasma (oval) has no influence in shaping the form of the new being. The shaping of the masses of protoplasma are entirely governed by the nucleus of the spermatozoon, and it makes no difference whether it exerts its influence on the protoplasma of the same or a different species. It is the male pronucleus always which governs the perpetuation of the species. What seemed only speculation in 1876 has been shown by crucial experiment, conducted by such untiring workers as the Hertwigs, Bischoff, Waldeier, Weissman, Boveri and others, to be a fact of nature. We will add that the ova, already present in the immatured embryo, are not as the spermatozoa are, new formed elements of the female organism, but developing particles (nucleoli?) left over from the *blasto-sphere*, after the three germinal layers have formed, and deposited upon the Wolfian bodies for use in the formation of the female pronucleus of the egg, the proto-plasm of which is derived from the nutritive juices of the mother.

In the fecundated ovum, then, we find that the *new nucleus*, formed by the union of the female and male pronucleus, contains the following elements: Particles derived from the maternal father as contained in the female pronucleus; and particles derived from the father, as contained in the male pronucleus—these two factors, then, furnish the material which decides the form of the offspring. These two factors, also, are the sole carriers of all inherited qualities of the offspring. The mother, furnishing the food and environment ante-natally, supplies in a narrower sense some of the acquired peculiarities, which are enlarged post-natally by the same factors.

CHLOROFORM AND ETHER.

Elsewhere we print some extracts of the conclusions of the Hyderabad Commission upon the action of chloroform. Two points we have there omitted and reproduce them here in order that they may get the prominence which they so eminently deserve. Many have been the discussions as to the relative dangers of ether and chloroform administration—yes, even the endeavor was made in a learned body of physicians, not many miles away, nor many years ago, to settle the question by a majority vote. And here, as elsewhere, the great mistake was made of not considering the effect of the two agents UNDER THE SAME CONDITIONS. Ether, if administered in the manner of chloroform, will not produce efficient anæsthesia; such a condition of imperfect anæsthesia would never be adopted by any surgeon accustomed to operating under chloroform. If surgeons choose to be content with a condition of semi-anæsthesia, it can, no doubt, be produced with perfect safety under ether, though with discomfort to the patient. If, however, perfect anæsthesia is required, it can be procured by excluding the air more rigidly; but there is exactly the same danger as there is in giving chloroform, and with exactly the same succession of phenomena, namely: first anæsthesia, then cessation of the respiration, then of the heart movements, and finally death.

Again, if chloroform is administered in the manner of ether inhalation, and it must be admitted by anyone whose misfortune has made him an observer of promiscuous chloroform administration, that this practice is by no means a rare occurrence, it cannot be denied that the results *can* be and often are disastrous. The wonder remains, that not many more persons die the victims of such inexcusable bungling; and it can be explained only in one way, namely, that the agent is not as dangerous a one as those who have had no experience and expertness in its administration would ask us to believe. True it is also, that those who have used chloroform for years and in large quantities, and often cannot be made to substitute anything else for it, except an always to be deplored accident robs them of a case upon the operating table, when they are led to believe (and we think in most cases erroneously and grossly unjust to chloroform) that the anæsthetic was THE cause of the death; or that the anæsthetic was the secondary factor in the killing, for which the prime cause was furnished by a diseased heart, of which the fatty heart is the most dreaded variety. To all of this the writer of this editorial interposes his most solemn demurrer. His experience of a quarter of a century coincides exactly with the second point of the Hyderabad Commission's conclusions, which we have reserved for this space:

> "The truth about the fatty heart appears to be that chloroform *per se* in no way endangers such a heart, but on the contrary, by lowering the blood pressure, lessens the work which the heart has to perform, which is a positive advantage. But the mere inhalation of chloroform is only a part of the administration in practice. A patient with an extremely fatty heart may die from the mere exertion of getting upon the operating table, just as he may die in mounting the steps in front of his own hall door, or from fright at the mere idea of having chloroform, or of undergoing an operation, or during his involuntary struggles. Such patients must inevitably die occasionally during chloroform administration, and would do so even were ottar of roses or any other harmless vapor substituted for chloroform."

Anyone who will deny the correctness of this proposition has simply to admit that we, all of us, ought to abstain from many of the every day vocations of life, such as traveling on cars and ships, of using explosives in any way, or of eating fruit containing seeds; for men have been crushed in railroad wrecks, drowned in ocean disasters, ground to dust by dynamite, or killed by seeds in the vermiform process.

This comparison is not just after all, for death in all these instances is attributable to the conditions mentioned; whilst it is by no means proven that chloroform, if properly administered, was the agent of destruction in any case. And suppose it was? Why shall not the thousandth case die a thank offering to death, a tribute paid for the lethean draught, vouchsafed to the nine hundred and ninety-nine?

Society Notes.

THE MEDICAL SOCIETY OF THF MISSOURI VALLEY

Convenes at St. Joseph, Mo., Thursday and Friday, March 20 and 21, 1890.

The committee of arrangements consists of Drs. Geiger and Pitts, of St. Joseph, and Carter, of Omaha.

This committee is making great efforts to increase the membership of the society, to secure an entertaining and profitable time to those who may be in attendance.

We hope the attendance may be large, the papers meritorious and the discussions lively and judiciously critical.

JAMES CARTER, M. D., Secretary.

THE NEBRASKA STATE MEDICAL SOCIETY

Selected Beatrice as the place of meeting in 1890. The Executive Committee having the date in charge, have fixed the 13th of May, and the following circular is for the instruction of members:

The attention of the members of the Nebraska State Medical Society is called to the coming meeting, (Beatrice, May 13th.) Upon the zeal and earnestness of the members more than upon the officers depends the success and benefit attending the meetings.

Make up your mind to be at the meeting, if possible, and as the time approaches shape your business to that end. Do not depend upon someone else to write the papers, reports of cases, etc. The member who writes a paper is the one who receives the most benefit from that paper, in that it causes him to think and study to make the production presentable and, sometimes, to defend it.

Send in your titles as early as possible. They *must* be in the hands of the Secretary by April 25th, to secure a place in the printed program.

Members are urged to see that applications for membership are forwarded early, so that the work of the Committee on Credentials may be efficient. Blanks will be furnished by the Secretary. It is expected that rates of transportation will be secured.

M. L. HILDRETH,
LYONS, February 15th. Secretary.

IOWA STATE MEDICAL SOCIETY.

To the Medical Profession of Iowa:

We tender you a cordial invitation to attend our annual meeting April 16-18, 1890, at Des Moines. The society is in a flourishing condition, and its sessions are always interesting and profitable. We will present this year an unusally good programme and anticipate an enjoyable occasion. Measures of importance will be presented and discussed relative to the enlargement and extension of the benefits of state and auxiliary co-operation. Our state ranks high in population and intelligence, and her representative men of the various professions have an acknowledged national reputation. There are in Iowa about 3,000 regular physicians, and only a small percentage of them are members of the State Medical Society. The fifty local societies of the state have a membership of 1,500, are in good working order, and it is to the interest of each that it have full representation at this meeting. An appeal is therefore made that each county or district organization send a complete delegation and that the old members assemble once more with us. Let business matters be laid aside for a few days and the revival of professional interest and discussion be taken in hand. Those who have failed to retain their permanent membership can be re-instated by paying their arrears, or by coming as delegates. All railroads doing business in Iowa have granted the usual one and one-third rates, if the conditions stated elsewhere are complied with.

We hope this appeal will not be in vain, and that the profession will generously respond and make this the largest meeting we have had for years. As we have no way of reaching many of the profession, a favor will be conferred by those who receive this if they will cause this to be read by every eligible physician in the state. Any further information will be cheerfully given by the Secretary or by the chairman of the committee of arrangements.

PROGRAMME.

The following is a list of the papers to be read in the various sections so far as can be definitely learned. Others are promised and should be reported to the chairman of the proper section, and to the Secretary, not later than one week before the meeting. Twenty minutes are allowed for the reading of each paper, and the same for its discussion.

SECTION ON PRACTICE OF MEDICINE.

J. T. PRIESTLEY, CHAIRMAN.

Report..........J. T. Priestley, Des Moines
Criminals..........L. J. Adair, Anamosa
Diabetes Mellitus and its Treatment..........
..........H. G. Ristine, Ft. Dodge
Diphtheria..........Perry Engle, Newton
Observations on Fever, and the New Antipyretics..........
..........G. E. Crawford, Cedar Rapids
Importance of Accuracy in Diagnosing, and Aids to same
..........H. L. Getz, Marshalltown
A report of some cases of Intubation..........
..........D. W. Smouse, Des Moines
Addison's Disease..........C. E. Currie, Des Moines
Nature's Thermo-Barometor..........
..........Woods Hutchinson, Des Moines
Diphtheria..........G F Jenkins, Keokuk
Paper..........A. B. Poore, Cedar Rapids
Paper..........Elizabeth Hess, Iowa City

SECTION ON SURGERY.

E. F. CLAPP, CHAIRMAN.

Report..........E. F. Clapp, Iowa City
The Present Mode of Examining Pension Claimants; its Advantages and Disadvantages, with some Suggestions..........John P. Savage, Sioux City
The Present Status of Hernia Operations..........
.... J. W. Kime, Ft. Dodge
Contusions of the Abdomen....E. H. King, West Liberty
A Case of Syphilis, with Amputation of the Leg..........
..........S. W. Clark, Oskaloosa
Advantage of Early Correction of Deformity in Children
..........J. W. Cokenower, Des Moines
Tubercular Pathology and its Influence upon Operative Surgery..........W. F. Peck, Davenport

SECTION ON MATERIA MEDICA.

S. H. STUTSMAN, CHAIRMAN.

Report..........S. H. Stutsman, Burlington
Alcohol as a Therapeutic Agent..........
..........Mary B. Tuttle, Burlington
Analgesics and Antipyretics......C. E. Barnes, Burlington
Surgical Treatment of Pleuretic Effusions..........
..........P. M. Jewell, Ossian
How Shall We Reduce High Temperature?..........
..........S. W. Moorehead, Keokuk
Paper..........O. D. Benson, Des Moines

SECTION ON OBSTETRICS AND GYNECOLOGY.

B. H. CRILEY, CHAIRMAN.

Report..........B. H. Criley, Dallas Center
Transfusion in Post-partum Hemorrhage..........
..........L. Schooler, Des Moines
Can Laceration of the Perinæum be Prevented in Labor?
..........C. M. Drumeler, Panora
Meddlesome Conduct in Ordinary Cases of Confinement..
..........D. S. Grossman, Minburn
Fibroids of Uterus..........D. W. Crouse, Waterloo
Electricity in Pelvic Exudates and Pelvic Pain..........
..........Margaret A. Cleaves, Des Moines
Case of Eclampsia in Third Month of Pregnancy..........
..........W. F. Graham, Atlantic
Case of Tubal Pregnancy, Treated by Electricity..........
..........D. W. Smouse, Des Moines

SECTION ON OPHTHALMOLOGY AND OTOLOGY.

H. B. YOUNG, CHAIRMAN.

Report..........H. B. Young, Burlington
Nervous Troubles from Eye Strain..........
..........W. H. Kinnier, Dubuque
The Ideal Operation for Cataract..........
..........W. C. Pipino, Des Moines
Notes on the Treatment of Trachoma..........
..........G. O. Morgridge, Muscatine
The Sphenoid Sinus..........E. H. Hazen, Davenport

SECTION ON STATE MEDICINE AND HYGIENE.

P. W. LEWELLEN, CHAIRMAN.

Report..........P. W. Lewellen, Clarinda
Food and Drink, and their relation to disease..........
..........J. F. Kennedy, Des Moines
Paper..........E. M. Reynolds, Centerville

SECTION ON DISEASES OF THE MIND AND NERVOUS SYSTEM.

I. P. BRUBAKER, CHAIRMAN.

Report..........I. P. Brubaker, Des Moines
Paper..........H. A. Gilman, Mt. Pleasant
Neurasthenia..........M. F. Riordan, Melrose

NECROLOGY.

The Committee will prepare and report deaths of members of this Society which have occurred since last meeting.

PRELIMINARY MEETING.

The Chairmen of the different Sections and all officers of the Society are requested to meet in Des Moines on Tuesday preceding the Annual Meeting to confer with the President, Dr. J. M. Emmert, and the Chairman of the Committee on Arrangements, Dr. Lewis Schooler, at such place the latter may designate, for the purpose of arranging the programme and attending to other business matters.

COMMITTEES.

Arrangements—L. Schooler, Chairman; J. T. Priestley and J. W. Cokenower, Assistant Secretary, Des Moines; D. S. Fairchild, Ames; H. D. Ensign, Boone; E. C. Baker, Indianola.

On Publication—E. Hornibrook, Cherokee; J. F. Kennedy, Des Moines; W. D. Middleton, Davenport; with the Secretery and Treasurer, *ex officio*.

On Ethics—Donald Macrae, Chairman, Council Bluffs; J. Williamson, Ottumwa; Wm. Boys, Waverly; J. H. Graham, Morning Sun; G. P. Hanawalt, Des Moines.

Revision of the Constitution and By-Laws—C. M. Hobby, Iowa City; H. G. Ristine, Fort Dodge; G. P. Hanawalt, Des Moines.

Finance—T. B. Lacey, Council Bluffs; W. F. Graham, Atlantic; J. A. Scroggs, Keokuk.

Necrology—First District, D. Scofield, Washington; Second District, A. A. Cooling, Wilton; Third District, S. N. Pierce, Cedar Falls; Fourth District, Irving W. Smith, Charles City; Fifth District, J. S. Love, Springville; Sixth District, B. F. Hyatt, Ottumwa; Seventh District, T. J. Caldwell, Adel; Eighth District, E. M. Reynolds, Centerville; Ninth District, S. N. Harvey, Neola; Tenth District, W. S. Schermerhorn, Jefferson, Eleventh District, G. W. Beggs, Sioux City.

REDUCED RATES.

Reduced rates have been granted on all roads in Iowa. When you buy your ticket be sure to ask the agent for a certificate that you have paid full fare one way.

Present these early in the session to the Secretary for his signature.

J. M. EMMERT, President, Atlantic.
C. F. DARNALL, Secretary, West Union.
L. SCHOOLER,
Chr. Com. Arrangements, Des Moines.

AMERICAN MEDICAL ASSOCIATION.

The Forty-first Annual Session will be held at Nashville, Tenn., beginning Tuesday, May 20, 1890, and continuing four days.

CONCERNING THE TENTH INTERNATIONAL MEDICAL CONGRESS.

110 West 34th Street.
NEW YORK, March 7, 1890.

I am directed by the Secretary General of the Tenth International Congress to give the greatest possible publicity to the circular, the main points of which I herewith transmit to you with the request that they be published.

Very respectfully yours,
A. JACOBI, M. D.

INVITATION FOR AN INTERNATIONAL MEDICAL AND SCIENTIFIC EXHIBITION.

In connection with the Tenth International Medical Congress to be held in Berlin, between the fourth and tenth of August, there is to be an International Medical and Scientific Exhibition. The exhibits will be of an exclusively scientific nature, as follows:

New or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of apparatuses for photography and spectral analysis as far as applicable to medicine.

New objects and preparations in pharmacological chemistry and pharmacy.

New foods.

New or improved instruments subservient to any of the departments of medicine, including electrotherapy.

New plans and models for hospitals, convalescent homes, and disinfecting and bathing institutions and apparatuses.

New arrangements for nursing, including transportation, baths, etc.

New apparatuses in hygiene.

Applications or inquiries inscribed "Ausstellungs-Angelegenheit," and accompanied with a printed card containing the name and address of the firm thus applying, ought to be directed to the Secretary General, Dr. O. Lassar, Carlstrasse No. 19, Berlin, N. W., Germany.

R. VIRCHOW, President.
E. VON BERGMANN, E. LEYDEN, W. WALDEYER,
Vice-Presidents.
O. LASSAR, Secretary General.

Medical Progress.

NERVOUS AFFECTIONS MISTAKEN FOR UTERINE REFLEXES.—At the end of an exhaustive paper on "The Abuse of Uterine Treatment Through Mistaken Diagnosis," Dr. Wm. Goodell offers the following watch-words as broad helps to diagnosis: In the first place, always bear in mind what another has pithily said, that "woman has some organs outside of the pelvis. 2d. Each neurotic case will usually have a tale of fret or grief, of cark and care, of wear and tear. 3d. Scant, delayed, or suppressed menstruation is far more frequently the result of nerve-exhaustion than of uterine disease. 4th. Anteflexion per se is not a pathological condition. It is so when associated with sterility or with painful menstruation, and only then does it need treatment. 5th. An irritable bladder is more often a nerve symptom than a uterine one. 6th. In a large number of cases of supposed or of actual uterine disease which display marked gastric disturbance, if the tongue be clean, the essential disease will be found to be neurotic; and it must be treated so. 7th. Almost every supposed uterine case, characterized by excess of sensibility and by scantness of will power, is essentially a neurosis. 8th. In the vast majority of cases in which the woman takes to her bed and stays there indefinitely, from some supposed uterine lesion, she is bed-ridden from the brain and not from her womb. I will go further and assert that this will be the rule, even when the womb itself is displaced, or it is disordered by a disease or by a lesion that is not in itself exacting or dangerous to life. Finally, uterine symptoms are not always present in cases of uterine disease. Nor when present, and even urgent, do they necessarily come from uterine disease, for they may be merely nerve-counterfeits of uterine disease.—*Medical News*, Dec. 7, 1889.

THE STERILIZATION OF COW'S MILK.—That a necessity exists for the sterilization of cow's milk, before it is ingested by young children, is the opinion of the majority of the medical profession. The subject, however, seems to be in its infancy, as far as actual scientific investigation and practical clinical experience go. There are, nevertheless, a few vital points, which we obtain from the researches of those who have given the matter careful study. Dr. H. C. Haven says:

"It is an admitted fact that the sterilization of milk is one of the most important advances that has been made in regard not only to the treatment of digestive disorders of infancy, but also in artificial infant feeding." He, however, sounds a note of caution when he says: "We must not overlook that the fermentative changes which have already gone on in the milk before its sterilization may have given rise to products of albuminoid fermentation, which may be in themselves sources of disease which cannot be prevented by sterilization of milk at the time of consumption."

This is an important consideration and is the key to the whole matter. If, therefore, the milk be poisonous before attempted sterilization, it may still contain these "products of albmenoid fermentation," even after being submitted to a heat sufficient to destroy all germs of animal life. Milk should be fresh from the cow when submitted to the process of sterilization, and this process should be conducted with scientific care at or near the source of milk supply.

Much has been said in favor of Soxhlet's apparatus, yet we find many authorities who claim that it does not sterilize the milk; by this we mean, it does not completely sterilize it.

Prof. John Attfield, of London, has recently conducted a series of experiments on a large scale. He says:

"Many failures have conduced to success, and, as usual, have led to simplicity as regards practical processes. Shortly, I find, as a matter of principle, that if you succeed in getting the whole of your material to a temperature of 190° F., for one hour, you render it perfectly sterile. Only when you are dealing with a fluid in an active state of bacterial or microbic growth, do you need to heat it again, similarly, on a second day, to destroy the individuals which were in an earlier state of existence on the previous day—a state in which they existed at 199° F.; in all other cases, one heating is enough."

The present state of information regarding the sterilization of milk, may be summed up as follows:

1. Absolutely pure and fresh milk. This can only be guaranteed in the country, near the source of supply.
2. A temperature of not less than 190° F.
3. Hermetically sealed containers which have been themselves sterilized.
4. The process of sterilization should be conducted by experienced operators, who can determine when the milk is actually sterilized. That this is necessary is evinced by the fact that milk which does not sour is not by any means certain to have been sterilized.—*The Dietetic Gazette.*

A CASE IN WHICH THE NIGHT-CRIES OF HIP DISEASE WERE STOPPED BY FLEXING THE LEG.—B. D., a healthy looking child, six years old, was admitted to the Children's Hospital, May 25th, and entered the service of Dr. E. H. Bradford, through whose kindness I am permitted to report the case.

She has had hip disease for the past nine months, and has been under treatment for the last six, during which time she has worn a hip splint, a high sole on the well foot, and has walked with crutches.

The first three months of treatment she did very well, but after that she began to cry out in her sleep, at first only once or twice, and then as many as fifteen or twenty times during the night. There were no other acute symptoms; no signs of an abscess; no pain; no apparent deformity, either flexion, abduction or adduction; and the motion in the joint was by no means entirely restricted.

Because of the severe "night-cries" she entered the hospital. For the first two days she was kept in bed on a "Bradford frame," with the leg fixed by means of sand bags and a weight of four pounds for extension. Each night she cried out sharply many times. She was then given ten grains of the salicylate of soda, four times a day, as suggested by Dr. Lovett.

In the majority of cases this treatment has stopped the cries in a day or two, but in this case the soda salt was continued for about two weeks without any diminution in the night-crying. (During this time the extension weight had been doubled, without giving relief.)

On June 11th, by way of experiment, the salicylate of soda was omitted, and the leg was flexed at an angle of about thirty degrees with the bed, and the weight raised to pull in the same direction. That night she cried out once, and upon the six following nights she slept soundly all night.

On the night of the 18th of June, the leg was put down flat upon the bed, and she cried out once. This was repeated the following night with the same results. Again the leg was raised, and up to the time of discharge, with the leg held in this position, there were no more night-cries.

During the greater part of her stay at the hospital she was up and about the ward during the day, and the leg was flexed only at night. She is to carry out this same treatment at home.—*Epitome.*—*By Joel E. Goldwait, M. D.*

Treatment of the Uric Acid Diathesis.—In the treatment of the uric acid diathesis Dr. Henry Pickard advises the administration of water in large quantities, believing that it is of use in assisting mechanically in the expulsion of uric acid that may be deposited in the kidney and in diluting that which may be contained in the blood. Water alone possesses such slight solvent effects upon uric acid that to it should be added an alkali. Lithia greatly augments the solvent power of water and may be given in the following mixture:

℞.	Carbonate or citrate of lithium...	15	grains.
	Pulverized sugar..........................	1½	drachms
	Citric acid..................................	3½	drachms
	Bicarbonate of sodium................	4½	drachms

Mix and divide into sixteen powders, of which one should be given in a glass of water four times daily.

The solvent effects of the potassium salts are also well marked and they may be administered thus:

℞.	Bicarbonate of potassium......	1½	ounces
	Citric acid................................	1	ounce
	Water.......................................	12	ounces

M.

One ounce of this in three or four ounces of water makes an insipid solution that may be given even to children.

Some persons do not tolerate the alkaline carbonates well and, for such, the phosphate of sodium, administered in doses of from thirty grains to two drachms, is an efficient substitute.

The alkaline benzoates are also excellent solvents, and change the insoluble uric acid into the soluble hippuric. The benzoates of sodium and calcium are perhaps the best and may be administered in solution or in pill form in doses of from three to thirty grains. Benzoic acid may also be used, the following being an excellent formula in which to administer it:

℞.	Benzoic acid..................	15	grs. to 1 drm.
	Phosphate of sodium...	2½	drachms
	Syrup............................	7	drachms
	Water............................	3	ounces

M.

One-fourth to be taken at a dose.—*Journal de Medecine de Paris.*

Iodoform in Surgery.—The true position of iodoform as a surgical dressing has long been questioned. On the one hand are the surgeons who declare that it is a valuable antiseptic; on the other, are the mycologists apparently proving by laboratory experiments that it has little or no antiseptic power. In the *Annals of Surgery*, January, 1890, Mr. A. Ernest Maylard, of Glasgow, records an elaborate series of observations upon the influence of iodoform on bacteria, which seem to prove that iodoform in great excess has a germicidal effect upon the microbes of pus.

Where the microbes are in abundance, some retarding influence appears to be exercised by iodoform upon their growth and even some diminution in the numbers which subsequently develop; but, if the number present be large, no germicidal effect is observed.

The general result of this series of experiments seems to show that iodoform has some distinctive power, and that its supposed or acknowledged value in surgery is borne out by experiments in the laboratory.

It may fairly be assumed that where iodoform is added to a wound, it will be largely in excess of any microbes present, and, therefore, precisely in the position in which the experiments seem to indicate that its antiseptic power lies.

As compared with many other much more powerful antiseptics, the special value of iodoform must rest upon its prolonged action. Solutions are absorbed, or carried away by the discharges, whereas iodoform remains as an almost permanent application. So that it is not infrequent to find on the removal of a dressing, some weeks after its original application, the iodoform still on the surface of the wound, and as active—if the pungency of the odor may be accepted as a criterion of the continuance of its antiseptic power—as when first used.

[These observations do not support the conclusions of Tilanus (*Centralblatt f. Chirurgie*, January 4, 1890), whose experiments convince him that iodoform has a certain amount of influence in retarding the growth of tubercle bacilli, but that in fresh wounds and non-specific suppuration it is only useful as a dry protective.—ED.]—*Medical News*.

THE ACTION OF CHLOROFORM AS DEVELOPED BY THE EXPERIMENTS OF THE 2D HYDERABAD COMMISSION.—The respiration stopped before the heart in every case.

In the majority of cases the heart stopped from two (2) to six (6) minutes after respiration ceased.

Variation in the method of preparation of the animal does not seem to effect the action of the chloroform.

The administration of morphine prolongs anæsthesia; but also lessens restoration by artificial respiration.

Artificial respiration, if commenced within thirty seconds after respiration ceases, was almost always successful in restoring the animal; and the reverse, if commenced after sixty seconds.

Chloroform, when given continuously by any means which ensures its predilution with air, causes a *gradual* fall in the mean blood pressure. This fall is hastened or lessened as the chloroform is freely inhaled, or highly diluted with air.

Struggling first raises the blood pressure, which is followed by a more decided fall, according with the increased inhalation of chloroform in consequence of the deeper and gasping respirations accompanying the effort.

Holding the breath, a species of temporary asphyxia, lowers the blood pressure, which is further increased by the rapid inhalation of chloroform, by the succeeding rapid and gasping respiration, to the verge of danger.

Asphyxia, complete or almost complete, is followed by a more marked fall of the blood pressure, almost to zero, and the heart's action becomes excessively slow, or even stops for a few seconds This effect of asphyxia is the result of stimulation of the *vagi*.

Irritation of the *vagi* diminishes rather than enhances the danger of anæsthetics. The slowing of the heart's action being only temporary, the excessive conveyance of the chloroform vapor to the nerve centres is thereby abolished—just as it is by voluntary or involuntary holding of the breath prevented from entering the lungs. The temporary exhaustion of the *vagi* after stimulation is to be feared, and not the actual stimulation as long as it is continued.

The theory which has hitherto been accepted is that the danger in chloroform administration consists in the slowing or stoppage of the heart by Vagus inhibition. This is now shown to be absolutely incorrect. There is no doubt whatever that the controling influence of the vagus on the heart is a safeguard, and that it is the exhaustion of the nerve which is dangerous.

Granting that chloroform has a gradual paralyzing effect upon the heart's tissue, we must conclude that such an effect, in the degree in which alone it could occur in the practical inhalation of chloroform, would rather be a source of safety than of danger, because it would prevent the absorption of the residual chloroform and its distribution through the system.

Chloroform has no power of increasing the tendency to either shock or syncope during operations. If they from any cause do occur, they prevent, rather than aggravate, the dangers of chloroform inhalation.

Hemorrhage in no way affects the action of chloroform, except in so far that a patient, who has been nearly bled to death, would require less chloroform in his system to put him in a state of anæsthesia.

Surgical Progress.

THE SURGERY OF THE LIVER.—Mr. Lawson Tait reviews (*Edinburgh Medical Journal*, October and November, 1889) his experience in hepatic surgery, giving his cases in tabulated form, and in some instances with much detail. He has performed the operation of cholecystotomy fifty-five times, and fifty-two of the patients recovered. One old woman died of suffocative catarrh some weeks after the wound was healed, and two others died of cancer of the liver, which was, in all probability, the cause of the distended gall-bladder in one of them, for no gall-stones were found which could be removed. In the second, the death of the patient four months after the operation, revealed extensive cancer with suppuration of the liver. He obtained very great relief from the opening of a suppurative gall-bladder, and the removal of a large quantity of gall stones. As a matter of fact, in not a single instance did the patient die from the operation. The remainder of these cases are in perfect health, and as well as they ever have been, with one exception.

As to operations upon the gall-bladder, Mr. Tait calls attention to the following circumstances: The gall-bladder is an organ subject to periodic filling and emptying, the latter process being accomplished by contraction of the muscular walls of the organ, and this contraction is far more powerful than is generally believed. The gall-bladder also secretes a quantity of clear albuminous fluid from its mucous surface, and this fluid contains some kind of fermentative principle. It is this fluid which distends the gall-bladder in cases of impacted calculus—may distend it, in fact, to an enormous size. If, however, the duct happens to be occupied by a calculus at the time of the operation, the wound at the base of the gall-bladder would not remain closed, but would speedily be torn open; and it is a matter of extreme difficulty—in fact, it is a matter of absolute impossibility—to be perfectly certain during the operation of cholecystotomy that all the stones are removed from the duct. The canal may have been distended by the passage of a calculus urged forward by the pressure of the secretion of mucus from the walls of the gall-bladder. So long as the stone is in the cystic duct, the contents of the distended gall-bladder consist entirely of this clear mucus. After the stone has passed the mouth of the liver duct the bile passes into the gall-bladder, its passage into the duodenum is prevented, it is reabsorbed into the system, and jaundice is produced. It is the only condition in which jaundice is possible from the passage of a gall-stone, but, as the common duct is wide and easily dilated, these attacks of jaundice are very evanescent, or are rarely seen. So short a time, in fact, is required by the passage of a gall-stone from the common duct, that in the great majority of instances it is perfectly certain jaundice never appears; but suppose that the operation was performed whilst the stone was in the duct, the bile would at once tear the incision open and pass wholly into the peritoneal cavity.

The cystic duct in its normal state is of much smaller diameter than the common duct, and more difficult to distend, and the agonizing pain of a passing gall-stone seems to be limited, in a great measure, to this part of its journey. Langenbuch's proposal to remove the gall-bladder may be regarded as intrinsically absurd, for there can be no reason for removing any organ merely because it has some calculi in it.

Continuing, Mr. Tait digresses to make the following interesting remarks:

"I have had more than one occasion to draw attention to the astonishing disappearance of tumors, often of large size, after a mere exploratory incision. The absolute silence with which these statements have been received is very remarkable, and is capable of explanation, either by the fact that my papers have not been much read, or that the statements I have made on this subject have been received with a silent incredulity. They are true enough, though, for all that; and, by-the-by, the experience of others will substantiate them. The cases in which I have seen tumors disappear in this way have mainly been cases of diseases of the liver, spleen, and head of the pancreas. I have seen others, where the exact site of origin of the growth could not be accurately ascertained, disappear equally; and I have also seen at least one case of uterine myoma go away altogether after a simple exploratory incision.

"The cases are far too numerous, and the results indicate sequence far too clearly, for us to dismiss the phenomena as a mere coincidence; nor can we accept the explanation of subsequent medical treatment as having brought about this much-desired ending. I am satisfied that the mere opening of the peritoneal cavity has a direct influence in setting up the process of absorption of the tumor, and my conviction in this direction has increased my confidence in the principle of exploration. That some emphatic physiological change is at once set up by opening the peritoneal cavity is clearly indicated by the uniform onset of a most distressing thirst, which lasts for days, and is not seen so markedly after any other operation known to me. Let the incision in the abdominal wall be made down to the peritoneum, but let the serous cavity remain unopened, and this thirst is not marked. But let the peritoneum be opened but a finger's breadth, and the result is marked. That a therapeutic change is effected in the peritoneum itself by the mere opening of the cavity is now universally recognized in the treatment of what we call tubercular peritonitis by abdominal section. I have now had a large experience on this point, and can say positively, that we can cure permanently and speedily cases that have even gone so far as suppuration, by opening and cleansing. But in the bad cases in all probability the cleansing is never complete, no matter how much time and care are spent on it. And, in the non-purulent cases, I very often do no cleansing at all, but merely empty out the serum and put in a draining pipe. Yet the great majority of these cases are cured by these simple means. * * * Four times in my life I have opened the abdomen for the purpose of removing enlarged spleens, and in every one of the instances I have been deterred from proceeding with the operation by reason of the hopelessness of the outlook for the patient. Strange to say, in three of the four patients the tumor has disappeared and they are now to my knowledge—or were, at least, quite a short time since—in perfect health; the fourth succumbed to the exploratory incision."—*Am. Journal Med. Sciences.*

Societies.

[Secretaries are requested to keep The Clinic informed of anything of interest in connection with the various societies. Send programmes and minutes of meetings for publication.]

SOCIETY CALENDAR.

Nebraska State Medical Society.—Sessions annual. Next meeting May 13, 1890, at Beatrice. President, J. C. Denise, A. M., M. D., Omaha; Secretaries, M. L. Hildreth, M. D., Lyons, Neb , L. A. Merriam, M. D., Omaha.

Iowa State Medical Society.—Annual meeting at Des Moines, April 16, 1890. President, J. M. Emmert, M. D., Atlantic; Secretaries, C. F. Darnall, M. D., West Union., J. W. Cokenower, M. D., Des Moines.

Missouri Valley Medical.—Sessions Semi-annual. Third Thursday and Friday ot September and March. Meeting place, migratory. Dr. J. M. Emmert, president, Atlantic, Iowa; Dr. James Carter, secretary, Omaha, Neb. Annual meeting in September.

Northern Kansas Medical Society.—Sessions held Semi-annually in November and May. Place of meeting migratory. Dr. Noah Hayes, President, Seneca, Kas.; Dr. William Stranger, secretary, Oxtell, Kas. Annual meeting in May.

Central Kansas District Medical Society.—Sessions quarterly. Meets first Thursday in February, May, August and November. Annual meeting in May. Meeting place migratory. Dr. W. A. Phillips, president, Salina, Kas.; Dr. A. S. M. Anderson, secretary, Salina, Kan.

Missouri State Medical Association.—Session annual. Next meeting May 20, 1890, at Excelsior Springs. President, Dr. L. W. Matthews, Carthage, Mo.; Secretaries, Dr. J. C. Mulhall, St. Louis; Dr. Joseph Sharp, Kansas, City.

Jackson County (Missouri) Medical Society.—Sessions monthly. Second Thursday evening. Always at Kansas City. Annual meeting in October. Dr. A. P. Ormsby, Kansas City, Mo.

Northeastern Kansas Medical Society.—Sessions quarterly. First Thursday in December, March, June and September. Place meeting migratory. Dr. L. Reynolds, Secretary, Horton, Kas.

Reviews.

Practical Electricity in Medicine and Surgery—By G. A. Liebig, Jun. Ph. D. and George H. Rohe, M. D.

It must be true that electricity, as a means of cure, is assuming considerable importance when one publisher can put forward in the space of one year two such works as that of Dr. Massey, which we brought to the attention of our readers in a former issue, and that of our present notice. This book very clearly demonstrates the advantages and dangers of specialistic writing for the general reader. We take it for granted that Dr. Liebig, of Johns Hopkins' University, is the author of the first part of the book—the exhaustiveness of which in dealing with electrical and magnetic apparatuses, their construction and use, leaves nothing to be wished for. In fact, it seems to us that the pages are addressed rather to the advanced students of the university, of which the author is a teacher, than to the general practitioner of medicine. We presume we must thank the author for his assumption that the average doctor is at home with algebraic formulæ. Nevertheless we are constrained to admit that the majority of the present generation of general practitioners, know more of anatomy surgery, medicine, etc., than of algebra. The author will excuse us, therefore, when we suggest that in a future edition of the work, he will reduce his algebraic formulæ to common, every-day English. His intention in this publication being evidently to SERVE the profession, and not to *teach* it. It will lengthen the text somewhat, but it will make it intelligible to more readers.

The second part, written, we doubt not, by our friend Dr. Rohe, bristles all over with that style so peculiarly his own, an epigrammatic terseness. This happy part enables him to put into 200 pages, printed in clear, large type, everything known of any practical use in electro-diagnosis, and of pronounced efficacy in electro therapeutics.

The reviewer is fully cognizant of the dangers of fulsome flattery, or self-glorious criticism, and acquainted as he is with the works, freely drawn from by the authors of the present volume, he cannot help stating that their work, especially that of Dr. Rohe, is very happily accomplished, in that they have succeeded in avoiding the chaff when garnering the grain for the benefit of the reader.

The mechanical make-up is the work of F. A. Davis, Philadelphia, and comes not only up to, but far excels that with which we all are acquainted, in the creditable publication of the Annual of the Universal Medical Sciences. A. S. v M.

Essay on Medical Pneumatology, a Physiological, Clinical and Therapeutic Investigation of the Gases. By J. N. Demarquay, surgeon to the Municipal Hospital, Paris, etc. Translated, with notes, additions and omissions, by Samuel S. Wallian, A. M. M. D., published by F. A. Davis, 1231 Filbert street, Philadelphia, Pa. Cloth, $2.00; one-half rus. $3.00.

The translator's preface states that the complete work of Demarquay consists of 861 octavo pages, and as this work contains less than 300, much of the original has been omitted, and only that retained which seemed to be reliable and practical.

Chapter I is devoted to a study of the physiological condition of the gases of the blood.

Chapter II, the medical history and physiological action of oxygen, administered by inhalation, injection and immersion.

Chapter III gives the various methods of preparing and administering oxygen, and chapter IV its therapeutic action in medicine and surgery.

In chapter V we have a discussion of nitrogen, monoxide of nitrogen, and hydrogen.

The last part of the work, chapter VI, comprising about sixty pages, is by the translator, being corroborative experiences of recent observers, personal opinions, improvements in apparatus, and general suggestions. Here we have a very readable and valuable disquisition on peroxide of hydrogen so lately revived as an antiseptic. One object the translator seems to have in view is to place the use of oxygen on a scientific basis, and by popularizing it, take it out of the hands of quacks and cranks. From the many illustrations and specific directions, the general practioner will have no difficulty in utilizing this valuable agent and he will be surprised at the diversity of indications met by it.

A Manual of Nursing—Medical and Surgical. By Lawrence Humphrey, M. A. M. R. C. S., Assistant Physician to and Lecturer to Probationers at Addenbrook's Hospital, Cambridge. Philadelphia: P. Blakiston Son & Co., 1012 Walnut street, 1890. 8x5½ inches, 240 pages.

There is included in this work a chapter each on the general management of the sick room in private houses, general plan of the human body, diseases of the nervous system, diseases of the respiratory organs, diseases of the heart and blood vessels, digestive system, skin and kidney, in children; on fevers, wounds and their complications; fractures, operations, management of child-bed, appliances, bandaging, antiseptic dressings, artificial respiration, batteries, massage, cooking for invalids, with numerous illustrations.

Transactions of the Iowa State Medical Society, Vol. vii, 1886-89. Published by the Society, Dubuque, Iowa.

In this volume of 558 pages are embodied the proceedings of the society for years 1886-87-88 and '89, with the reports and papers. In addition there is the constitution and by-laws, the act regulating the practice of medicine, now in force; an official register (from date of organization), and list of members numbering over four hundred.

Tenth Annual Report of the State Board of Health of Illinois. With an appendix embracing Coroner's Inquests, Meteorological Tables, Illinois Army Board of Medical Examiners, and official register of physicians and midwives. Springfield, Ill., 1890. By a foot note we are told the delay in issuing this report is owing to the complications that existed in the state printing contract during the years 1887 and 1888.

Proceedings and Addresses at a Sanitary Convention held at Pontiac, Mich., October 17 and 18, 1889, and Proceedings and Addresses at a Sanitary Convention held at Vicksburg, Mich., December 5 and 6, 1889. Both held under the direction of a committee of the State Board of Health and a committee of citizens. Published at Lansing by Darius D. Thorp.

NB792